

# Vertically Challenged

Will cable and telco TV distributors buy content to compete in the new OTT order? 10/10/2016 8:00 AM Eastern

By: [Mike Farrell](#)

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*Marshawn Lynch, a retired Seattle Seahawks player, scales a mountain on an episode of NBC's 'Running Wild With Bear Grylls.'*

*BEN SIMMS/NBC*

## TakeAway

**With OTT upending TV's distributor-content producer relationship, media companies are taking a new look at an old idea: vertical integration.**

As Wall Street still waits for more consolidation among video distributors, many such companies are eyeing deals to buy content assets that they had jettisoned just a few years ago to unlock hidden value.

So-called vertical integration, the marriage of distribution and content under one corporate roof — owning the pipe and the water — has always looked better on paper than in practice. For pay TV providers, owning a large block of the content they make available to customers would seem to lead to lower programming costs and greater exclusivity.

But operators found out the hard way several years ago that isn't necessarily the case. As the industry grew, Federal Communications Commission programming-access rules made it virtually impossible to have truly exclusive content. With that need to make carriage deals as arm's-length transactions, limiting any possibility for deep discounts, there was little value in keeping programming and distribution together.

Several companies cut the vertical cord by spinning off content assets over the past two decades, including AT&T and Liberty Media in 2001; Cablevision

Systems (now Altice USA) with both MSG Networks (2010) and AMC Networks (2011); Viacom and CBS in 2006; and Time Warner Inc. and Time Warner Cable in 2009.

The rationale behind each split was varied, but the transactions shared a common theme: Unlocking the value of content that was hidden inside what was, at the time, a lower-growth distribution business.

As the industry moves toward an over-the-top model, where mobility and slimmed-down content packages rule the day, some believe that putting those assets together makes more sense.

Viacom and CBS will probably be the first to inch toward reconciliation, as both have put together committees of independent directors to look into a combination, with the blessing of largest shareholder National Amusements. Some analysts see that as more of a horizontal move, as CBS and Viacom both produce programming. Nonetheless, some are beginning to warm up to the idea of putting distribution and content together again.

### ***CONSOLIDATION'S NEXT PHASE***

The change of heart comes just as phase one of a continued consolidation wave among distributors winds down. In the wake of megadeals like Charter Communications's acquisitions of Time Warner Cable and Bright House Networks; AT&T's purchase of DirecTV; Altice USA's purchases of Suddenlink Communications and Cablevision Systems; and even Comcast's abandoned attempt to buy TWC, the thought is that the industry will now turn its M&A attention toward content.

The big difference is Internet video, which has changed attitudes toward vertical integration, Barclays analysts Kannan Venkateshwar and Amir Rozwadowski noted in a recent report.

"In our opinion, distributors have the ability to subsume all content under their aggregation umbrellas, which makes the whole concept of cable networks irrelevant," the Barclays analysts wrote.

There have already been a smattering of content/distribution deals: Verizon Communications purchased a 24.6% stake in digital content producer AwesomenessTV in April, and Comcast purchased DreamWorks Animation for \$3.8 billion in TV in August, to name two.

Technology platforms that help further monetize video also have been a focus with Comcast's purchases of Visible World and investments in BuzzFeed and Vox Media, and Verizon's AOL and Yahoo buys. Others could follow suit.

"We would not be surprised if other distributors were to potentially embrace larger opportunities in the content arena over time," Venkateshwar and Rozwadowski wrote.

There appears to be no shortage of candidates. Speculation has been high that AT&T, fresh off its \$48.5 billion purchase of DirecTV last year, is on the hunt for more content.

Not everyone is convinced that vertical integration is making a comeback, though. Telsey Advisory Group media analyst Tom Eagan said that while there could be a few horizontal deals on the horizon — Viacom and CBS being the prime example — he doesn't expect to see any moves toward vertical integration.

"I think there has definitely been some MVPD horizontal integration, and there's definitely been some content integration, i.e. Lionsgate and Starz. But we haven't seen any vertical integration since Comcast-NBC," Eagan said.

### ***CONFLICTS ARISE***

Even Comcast's 2011 purchase of NBCUniversal — vertical integration's shining star — now has a slight tarnish because Comcast is conflicted in certain transactions, Eagan noted. For instance, increased retransmission-consent fees benefit the content side of the business, but could hurt the operation's cable portion.

"There's more of an internal conflict," Eagan said.

Comcast has claimed that retrans fees from NBC went from \$0 when it bought the broadcast network in 2011 to an expected \$800 million this year.

MoffettNathanson principal and senior analyst Craig Moffett also doubted the chances for a vertical-integration wave. In an email, he said the economic theory behind the vertical-integration concept is guaranteed supply or guaranteed distribution. Neither notion applies to media, he said.

“What’s left is mostly just exclusivity, and unless you believe that the program-access rules are going to sunset, exclusivity is illegal,” Moffett wrote. “I get the appeal on a superficial level, and I even get the grass is always greener argument, but the historical evidence for real synergy between content and distribution is extremely thin. If the program access rules do sunset, however, then it’s a completely different ballgame.”

Eagan was also skeptical of the earlier idea that that content companies would seek to combine in an effort to battle larger distributors, such as Charter Communications, which more than quadrupled its size after purchasing Time Warner Cable and Bright House Networks.

“The old-media model was getting beachfronts,” Eagan said. “Every new cable-network channel was a new beachfront to growing higher ad fees and more affiliate revenue. That’s not the game anymore. If you don’t have great content, it doesn’t matter if you have another beachfront.”

Still, AT&T is reportedly in the hunt for more content, and has kicked the tires on several media properties over the past year, including Starz (which was purchased by Lionsgate in June for \$4.4 billion) and Yahoo (purchased by Verizon in July for \$4.8 billion). According to a Bloomberg News report, AT&T CEO Randall Stephenson has a list of 40 to 45 companies that he constantly monitors, including peers and potential targets, as he plans his next move.

Adding more content seems to fit in with AT&T’s mobility strategy, which is further proffered by its planned launch of a new over-the-top service, DirecTV Now, later this year. DirecTV Now will have more than 100 live and on-

demand channels targeted at younger viewers. AT&T has signed several content carriage deals in the past few months to fuel the service, including with NBCU, Disney, Discovery Communications, A+E Networks, Turner Broadcasting System and Scripps Networks.

### ***MOBILE MOVES***

Both AT&T and Verizon have been active in the deal market and see mobility as the future of the distribution business. While Verizon has focused more on digital assets for its mobile go90 service, AT&T could take a more traditional route, with some analysts predicting that Time Warner Inc. could end up in its crosshairs.

Time Warner and AT&T officials declined to comment.

Time Warner has arguably been in play since 21st Century Fox abandoned its unsolicited \$80 billion offer for the programmer in 2014. Since then, Time Warner has launched HBO Now, a standalone OTT product for its flagship premium channel HBO, and set an Oct. 19 launch date for FilmStruck, with the Criterion Collection.

But along with cable networks like TBS, TNT, CNN and Cartoon Network, Time Warner also creates a large number of movies and television shows through its Warner Bros. Studios arm. Warner Bros. Television Group produces such cable and broadcast TV hits as *The Big Bang Theory*, *The Flash*, *Gotham*, *Rizzoli & Isles*, *Shameless*, *Supergirl* and *Westworld*.

Time Warner would attract a high price — Venkateshwar has estimated that a deal could be done for about \$97 billion, including assumed debt — which could limit the players willing to make a bid.

Perhaps fueling the deal speculation is the relative sluggishness of content stocks over the past year, as uncertainty around OTT, skinny bundles and declining subscribers have sent some investors for the exits. Disney, which had its stock price rise fourfold between 2010 and early August 2015 from about \$31 to \$121.69, saw a 20% decline later that month, after it was revealed that its flagship ESPN network had lost about 7 million subscribers over the

past few years. While Disney stock over the long haul is up by about three times its 2010 levels, it hasn't fully recovered from the August 2015 dropoff. Shares were at \$92.59 on Oct. 4.

Other content stocks have fared the same: 21st Century Fox, Discovery Communications, and Viacom are all down in the double-digit percentages from last August.

At the same time, distribution stocks — bolstered by continued broadband growth, consolidation speculation and a resurgence in video subscribers — have been on the rise.

Granted, consolidation has reduced the number of publicly traded distributors from six to four with the acquisitions of Time Warner Cable and DirecTV. But the four that remain are up a collective 30% since August 2015, driven by Charter's consolidation-spurred 28% rise and a 5% gain at Comcast, currently the only vertically integrated cable operator.

Comcast first announced its plans to purchase a 51% stake in NBCUniversal — including the NBC broadcast network and 16 cable channels such as USA Network, Syfy and Bravo — in 2009. In 2013 it went all in, buying the remaining stake in the programmer from General Electric for about \$16 billion.

In the past five years, Comcast has managed to rejuvenate NBCU's content business, with the broadcaster atop the current TV-season ratings among 18-to-49-year-olds for the third straight year and cash flow nearly doubling from \$3.7 billion in 2010 to \$6.4 billion in 2015. The content side has also helped fuel Comcast Cable's on-demand efforts.

Nowhere is that more evident than in Comcast's August airing of the 2016 Summer Olympic Games from Rio de Janeiro, where it offered more than 7,000 hours of content through live broadcasts on NBC and 11 cable channels; on-demand, through its X1 platform; and streamed online. Though overall ratings were down for the 2016 Olympics, Comcast still made about \$250 million from the Games.

The Barclays analysts see even more synergies for Comcast as the nation's largest cable operator moves into the wireless business. Comcast has activated an MVNO agreement with Verizon that would allow it to resell that carrier's wireless service under its own brand, and has said it expects to launch a product next year.

### ***BOON FOR WIRELESS?***

Venkateshwar and Rozwadowski believe that wireless, with its heavy video component, could make content ownership even more important.

“Over the last few years, however, with mobile broadband, smartphones, Internet video streaming, and e-commerce becoming mainstream, as well as consumers and advertisers starting to look across platforms for content, the ecosystem finally is at a place where cross-platform monetization is more achievable,” the analysts wrote.

Pivotal Research Group CEO and senior media & communications analyst Jeff Wlodarczak said it makes sense for Comcast to continue to dip into the content trough, but doubted other distributors would make the plunge.

“It may make sense for Comcast to bolster its existing NBC operations to do deals and potentially realize substantial synergies,” Wlodarczak said. But Comcast and Charter might do better to set their sites on a wireless carrier such as T-Mobile, he argued, adding that such a play would eliminate the telcos' only advantage over cable and could present huge synergies by allowing the MSOs to offload wireless traffic onto their own WiFi networks.

“The good news for cable is that getting into wireless is a lot easier than the RBOCs getting into cable's core business, super-fast terrestrial broadband,” Wlodarczak said

<http://www.multichannel.com/vertically-challenged/408312>

Multichannel News

# Comcast Standardizing on Terabyte Plan

Top ISP is deploying usage-based broadband policy 10/10/2016 8:00 AM Eastern

By: [Jeff Baumgartner](#)

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Following months of trials, Comcast began the commercial rollout of a controversial usage-based broadband policy last week that charges consumers extra if they exceed monthly data allotments.

The new policy, to be applied in most of the MSO's markets by Nov. 1, limits usage to 1 Terabyte (1,025 Gigabytes) per month before customers are charged \$10 per each additional bucket of 50 GBs.

Notably, those overage charges will not exceed \$200 each month no matter how much data a residential customer uses. Comcast is also giving customers two "courtesy" months before data overage fees would be applied.

## ***NORTHEAST NOT INCLUDED***

Comcast markets in the Northeastern U.S., including its hometown of Philadelphia, and in its Mid-Atlantic region, including Washington, D.C., are among the few areas that are not part of the MSO's current data plan rollout. Comcast has not announced if it will expand the policy to those areas.

In markets with the data plan, Comcast is also offering an unlimited data option that costs an additional \$50 per month, which is up from fees of \$30 to



\$35 per month, depending on the market, that the operator had previously been testing.

For light Internet users, Comcast offers a “Flexible Data Option” for customers on its Economy Plus and Performance Starter high-speed tiers that provides an automatic \$5 credit if their total monthly usage is less than or equal to 5 GBs per month. On that plan, Comcast charges \$1 for each 1 GB of data used over the 5-GB threshold.

Comcast’s data usage plans don’t apply to Comcast Business Internet subs, customers on “Bulk Internet” agreements or customers who use the MSO’s new Prepaid Internet service (offered in a handful of markets) or Gigabit Pro, service that uses fiber-to-the-premises technology.

With the commercial deployment, Comcast joins a growing mix of cable operators and Internet-service providers that have implemented usage-based Internet data policies, including AT&T, Mediacom Communications and Cox Communications. Altice USA-owned Suddenlink Communications also has a data plan policy that charges extra when customers exceed their monthly cap, along with a recently launched unlimited data option, but former Cablevision Systems properties now owned by Altice don’t implement data caps. Charter Communications, per the order approving its acquisition of Time Warner Cable, is prohibited from imposing data caps or charging usage-based pricing on residential broadband service for seven years.

### ***FCC TO INVESTIGATE CAPS***

Usage-based broadband policies have taken heat from critics who see them as a way for cable operators to drive more revenue while also keeping over-the-top video competition in check. The Federal Communications Commission is looking into data-cap policies but has not set a timetable.

Comcast, meanwhile, reasons in its FAQ about the policy that its data plan “is based on a principle of fairness. ... Those who use more Internet data pay more. And those who use less Internet data pay less.”

Comcast also stressed that about 99% of its customers don't use more than 1 TB in a month, and that median monthly usage is about 75 Megabytes.

To give customers a sense of how much data 1 TB is, Comcast's FAQ notes that it's roughly equal to streaming 600 to 700 hours of HD video, playing online games for more than 12,000 hours or streaming more than 15,000 hours of music.

Comcast provides an online meter that shows customers their data usage and also sends them an in-browser message and an email when they are close to or have exceeded the 1-TB cap.

### **Mapping a Fat Pipeline**

The bulk of Comcast's footprint will soon implement the MSO's data-usage policy.

Comcast's Terabyte usage plan is active in the following markets: Alabama (excluding the Dothan market); Arizona; Arkansas; Florida (Fort Lauderdale, Miami and the Keys); Georgia (excluding Southeastern Georgia); Illinois; Northern Indiana; Kentucky; Louisiana; Maine; Southwestern Michigan; Mississippi; Tennessee; Eastern Texas; South Carolina; and Southwest Virginia.

The plan is set to become effective Nov. 1 in these additional markets: Dothan, Ala.; Houston; California; Colorado; Florida (North Florida, Southwest Florida and West Palm); Southeastern Georgia; Idaho; Indiana (Indianapolis and Central Indiana, Fort Wayne and Eastern Indiana); Kansas; Michigan (Grand Rapids/Lansing, Detroit and Eastern Michigan); Minnesota; Missouri; New Mexico; Western Ohio; Oregon; Utah; Washington; and Wisconsin.

<http://www.multichannel.com/comcast-standardizing-terabyte-plan/408311>

Multichannel News

# Cable Tech at a Crossroads

**Top engineering execs from Comcast, Cox and Liberty Global weigh in on their key priorities, what's up with wireless, what's big in broadband and what's on their video horizons**9/26/2016 8:00 AM Eastern

By: Jeff Baumgartner, Next TV Editor, and Leslie Ellis, Contributing Writer

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This isn't your father's "cable" industry anymore. In fact, the word cable is no longer spelled out in the name of the NCTA, which last week rebranded as NCTA-The Internet & Television Association.

But that also means that what used to be true about "cable" operators is no longer true today. Rather than focusing on one new product or service at a time, these new-class service operators have to juggle twelve balls at once in order to keep up with consumer demands and the competition.

To get a fix on what's important as many people in the tech- and engineering-facing part of the industry converge on Philadelphia for this week's SCTE/ISBE Cable-Tec Expo, *Multichannel News* technology editor Jeff Baumgartner and Leslie Ellis, independent analyst and regular *MCN* contributor, caught up with some of the top engineering minds in the industry to discuss their priorities and to drill down into hot areas such as DOCSIS 3.1, wireless and mobile broadband, next-generation video, network virtualization and the shift to DevOps models.

What follows is an edited, transcript compiled from separate conversations with Kevin Hart, executive vice president and chief technology officer of Cox Communications; Balan Nair, EVP and CTO of Liberty Global; and Sree Kotay, who was recently promoted to CTO and EVP of Comcast Cable.

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## ***TECHNOLOGY PRIORITIES***

**MCN:** Let's level-set the conversation with your technological priorities. What are the top one or two things on your to-do list for Q4 and the rest of the year?

**Sree Kotay:** Really? Only one or two? One is, we want to continue to lean in to building elegant, differentiated products. We've been focused on building better products and services, and that focus has had a profound positive effect. We've done a lot of that for TV, and want to do it for other services, across the board. So you'll see us putting in foundations and building blocks this year, for some big things we'll do next year.

Two is the customer experience, with a real focus on simplification and self-service. It's an intense focus on how we engage with our customers — starting from the acquisition funnel, throughout the engagement — whether it's self-installs or enabling people to resolve issues themselves. It's an effort we're internally calling "All Digital." It's about giving our customers a powerful blend of self-service, transparency and visibility.

**Balan Nair:** Right now, it's mostly operational. If you really want to be a few steps ahead — and all trends indicate this — you have to change. Change is hard, but it's mandatory. Mark Twain said that the only person who likes change is a wet baby. He's right.

We're in the middle of a company-wide transformation that we call "Liberty Go." It's about putting the customer front-of-mind, completely. Customer first, front of mind, sides of mind, back of mind. For real — to the point of making the Net Promoter Score (NPS) metric part of performance bonuses.

**Kevin Hart:** First and foremost is our network transformation plan. We're putting together a 10-year network transformation plan with the hallmarks being around DOCSIS 3.1, Node+0 architectures — taking fiber deep — and then eventually leveraging Full Duplex [DOCSIS].

No. 2 is our strategy around trying to own the home, better enable the home, better enable the customer experience. Things like our new WiFi offering that we're launching called Panoramic WiFi. It's also the work that we're doing on new Contour, our new video experience, and we're continuing to make great progress with Cox Homelife, our home security/automation platform.

**MCN: Can you elaborate on the foundations and building blocks in the works?**

**Kotay:** On the technology side, it's obviously all the DOCSIS 3.1 work, looking at broadband and our XB6 [Gigabit gateway], which comes out of a lot of work on RDK-B, where the "B" stands for "broadband." It's radically improving visibility as a functionality to move up the value chain. As we think about connected services, that's one big element. In particular, we're focused on digital relationships, and evolving to serve the people in the house, not only the household address.

***HOT TOPICS IN TECH***

**MCN: WiFi: The hype machine around "smarter WiFi" and "intelligent WiFi" is pretty loud. What factors go into building a competitively superior WiFi service offering?**

**Kotay:** If you look up Maslow's hierarchy of needs, with self-actualization at the top, and air, water, food and shelter at the bottom — there seems to be a new element in that bottom slice, and it's WiFi. And the thing is, when people say "WiFi," they usually mean "end-to-end connectivity." My device is online, it's working and I can get to the services I want.

A lot of previous approaches have been focused on slivers of that problem. We fell into that category — well, you're connected with the CMTS, so you should be good! But the reality is, you have to look at the whole chain. It's not just the access layer, or the in-home things like speed and reach. It's the data centers, the back-end services, the care and the end-to-end-ness of it.

For instance, if you have a gaming console connected over WiFi to my gateway, I should know it's a gaming console, what kind of console it is and whether there are any issues impacting its connectivity, whether on our end or

somewhere else in the chain. The Internet is inherently a best-effort service. So we have to think about how to make it more than that — more carrier-grade, in a sense. Like broadcast video quality, in that it really, really works, all the time. It's not just about any sliver of that chain. It's the whole end to end. Our industry is uniquely positioned to tackle that challenge, but it takes a significant amount of focus and attention.

So the lesson to us was, let's stop thinking about it as just WiFi. "WiFi" has to mean all of it.

**Nair:** People say content is king. My boss likes to say that connectivity is king, and content is Kong. WiFi is obviously a big part of "connectivity." The world is moving away from single-point WiFi access. We'll have to look at a mesh network in the home, to achieve a very high quality of service. Step 1, we improve quality at the chip level; 2, improve the antenna(s). Next, embed the software that enables us to optimize things like beam-forming. All of that enables us to do a whole-home, holistic WiFi view.

**MCN: Kevin, tell us a bit more about this PanoramicWiFi offering.**

**Hart:** Eighty percent to 90% of the devices connected in the home are enabled by WiFi by our customer base. Enabling a better in-home WiFi experience is top of our list. Panoramic WiFi will have a tagline of, "It's wall-to-wall fast."

We'll be implementing some of the best-in-class WiFi gateway routers and will be leveraging over time the RDK-B component within those routers. We'll be installing extenders, depending on the size of the room and the [performance] of the signal quality, and focus on ease-of-use.

We're also going to be accompanying that with some additional focus from our techs in terms of the setup, giving them more set-up time to ensure quality of service and signal strength

We're launching that in the fourth quarter, in our California market, and then we'll be taking it more broadly in 2017.

## **WIRELESS AND GIGABITS**

**MCN: Multiple choice, with LTE-U and its impact on Wi-Fi capacity: 1.) Battle stations!; 2.) If only that were my biggest wireless concern! 3.) Don't worry, MuLTEFire will fix everything.**

**Nair:** We have to look at this from two sides — as a WiFi provider, and as a mobile business operator. Which means my answer is a little bit of all three. It's "battle stations," because if connectivity is king and it goes away, that's a real problem. It's certainly not our only wireless concern. That said, I'm confident that our collective work with MuLTEFire and other standards bodies will help. [Liberty Global and CableLabs announced last week they have joined the MuLTEFire Alliance.]

**Hart:** I think it's No. 2. I think there has been a lot of good work with the different organizations, including CableLabs and the Wi-Fi Alliance, to sort out some of the interoperability and co-existing requirements of LTE-U. I'm pretty sure that's going to work itself out over time.

I think trying to drive that in-home WiFi experience and also continue to build out our WiFi footprint where it makes sense are some of the things that are at the top of our list. And we're also keeping an eye on some of the advances of 5G from a wireless standpoint. It's both an opportunity for us and also a potential threat.

**MCN: Gigs and competition: Two years ago, we asked (some of you, anyway) about Google Fiber's threat to expand to a bunch more metros. Now, Google Fiber is being dragged through the mud by the Silicon Valley press, suggesting trouble in Google Fiber-ville. How does (or doesn't) that impact your Gigabit deployment and/or "fiber deeper" strategies?**

**Hart:** We launched our G1GABLAST product a couple of years ago and have had some really great success with that. Obviously, Google's not the only one building out fiber. There's AT&T and many, many others. That specifically hasn't had that big of an impact. We've always been committed to investing in our network, building out ubiquitous speeds and making sure we can deliver at peak hours with minimal congestion.

I mentioned the 10-year network transformation plan: Starting right now and into next year, DOCSIS 3.1 is high on our radar, so we're making great strides with the testing, deployment and trials of 3.1.

We definitely have a fiber-deep strategy and an N+0 architecture that we're working towards. We'll be doing that both to keep up with speed and contention and just to deliver a better quality of service. And taking fiber deep is also key to enable Full Duplex, ultimately, which will come after 3.1 to enable more symmetrical Gig speeds.

Yes, we'll definitely keep our eyes open on the competitive landscape, but we're going to keep doing what we've been doing for a couple of decades and keep investing in our network.

**Nair:** We're big on Gigs. Our bull's-eye product right now is about 200 Mbps. At a traffic engineering level, though, our peak downstream usage is in the 900 Megabit-per-second range in some markets. 920 Mbps is pretty close to 1 Gig. If you consider a serving area with 2,000 homes, at 50% penetration, times 1 Mbps, guess what? That's a Gig. Which is pretty much 25 DOCSIS channels. If that goes to 2 Gigs, that's 50 DOCSIS channels. We have 100. That's why we spend a lot of time on this.

### ***DEEP DIVE ON DOCSIS***

**MCN: DOCSIS 3.1: Status report please, for DOCSIS 3.1-based deployments — CPE [customer premises equipment] and CMTS [cable modem termination systems]? Anything notably different from prior DOCSIS upgrades?**

**Kotay:** We've launched D3.1 service in Atlanta, Nashville and Chicago, with more coming this year and next. We think our XB6 is the next big vision of connectivity, with DOCSIS 3.1 at the heart of it.

**Nair:** Short version is, we're in market and nearly done with CMTS. CPE begins next year.



**Hart:** We've got the 3.1 CMTS platforms up and running. We've got probably 50 different types of CPE that are working beautifully with the CMTS. Most of those are 3.0, so we're testing out the backwards compatibility.

It will be similar in many respects to DOCSIS upgrades in the past, but with the introduction of OFDM [Orthogonal Frequency Division Modulation], there will be a little bit of navigation in terms of the complexity. But we're feeling pretty good about it and the early results are very solid.

**MCN: Advanced Class question: Full-Duplex DOCSIS, or fiber-deeper? Or both?**

**Hart:** It's both, and from our perspective it's fiber-deeper first. To enable concurrency on 3.1, we'll continue to take fiber deeper and then get the full benefit of Full Duplex, depending on the service group size in any given market.

The other component is the remote PHY [initiative] as part of the fiber-deeper strategy and moving those electronics closer to the customer. That provides additional optionality to upgrade to Full Duplex and it also provides more optionality in the future potentially for some wireless [technology] in the remote cabinet if need be.

**Kotay:** We don't look at these sorts of technologies as competing with one another as much as we see them as increasingly powerful tools in an increasingly large toolbox. Today, we're offering Gigabit Pro, a 2-Gig symmetrical fiber-to-the-home service across our footprint, as well as D3.1-powered gigabit service in several markets, with more to come. For green-field development and MDUs [multiple dwelling units], fiber is often the best tool, but DOCSIS 3.1 and the forthcoming Full Duplex provide great flexibility to deliver gigabit speeds using our HFC network.

**Nair:** It's not an either-or situation. We like them both. We'll do fiber — we're doing fiber — where it makes sense and, as it turns out, it makes sense in lots of places for us. Full Duplex DOCSIS means building for symmetrical bandwidth. Symmetrical DOCSIS is more a question of "when" than "if." That's because right now, we're still delivering much more traffic to homes

than from them — it's asymmetrical. Going to node+0 (amplifiers) aligns us all for Full Duplex DOCSIS. So, whether it's customer-generated content or the next OTT-like thing, it means we don't have to swap out that last bit of coax.

**MCN: 4K, UltraHD, High Dynamic Range/HDR, wide-color gamut, 10-bit interleaving: What of all of this matters to you? How is it best harnessed to improve the life of people watching TV?**

**Nair:** Of that list, HDR is more impactful than just “plain” 4K. However, only 4K televisions have HDR, so they're kind of inter-linked in that way. We're launching HDR as something that comes with our 4K service. It came out in an earnings call as “EOS,” but that's more of an internal project name — it's cloud-based and will roll out in the U.K. first.

**Kotay:** We've done a lot of testing. You can see our view reflected in our product strategy. Short version is, all those things you listed are good things. There's just nothing bad about increasing resolution and so on. But the ones we're most focused on right now from a technical standpoint are HDR and wide color gamut.

We can show you some 1080p HDR video that looks better than 4K non-HDR. Do you remember when you first saw HD, next to a standard definition TV? It was, whoa, that's much better. HDR is the same. You don't realize you haven't seen a blue sky on your TV until you've seen it in HDR.

**Hart:** To me, HEVC [High Efficiency Video Coding], the new video compression, that's equally important. It's really being able to move that content around no matter what flavor it is from an efficiency perspective to preserve some of the bandwidth. I think all of those — 4K, HDR, etc. — are going to be important. What the consumers want and what the manufacturers can provide will work itself out based on the content that's produced. To me, the concern is how to transport all that information in the most efficient way.

## ***BANDWIDTH TRENDS***

**MCN: It wouldn't be a CTO conversation without talking bandwidth. What's the latest in broadband usage trend lines? (E.g., is the growth of the growth still in decline? Are there patterns worth noting?)**

**Hart:** CAGR [compound annual growth rate] on the downstream, in terms of utilization, is about 49% to 50%, and that's what we continue to model in our investment plan. From an upstream standpoint, we're probably in the 27%-28% range. We'll probably see that move into 30% or so. With all of the cloud-hosted solutions and cloud-managed solutions, it puts a lot more pressure on the upstream.

**Nair:** We're seeing peak speeds growing — and they're growing logarithmically. That keeps our attention. The main driver now is still video. With video, we used to have very large bundles, with smaller content libraries. The world is going to smaller bundles, with larger libraries of content.

**Kotay:** We double our network capacity every 18 to 24 months on average, and that has remained relatively constant. We can realize some efficiencies by doing less over the backbone and driving more regionalization, but as long as consumers' demand for rich, powerful online and video experiences continues to grow, and the quality of those experiences continues to improve, we know we need to stay one step ahead of what's next.

**MCN: At what point is entertainment video not the bulkiest passenger on broadband? What other bandwidth-insatiable things on the horizon have your full attention?**

**Hart:** We've always been a leader with business services; Cox Business is going to hit the \$2 billion revenue mark this year. I think there will be some additional applications and managed services, hosted solutions that will start to eat a lot of bandwidth but deliver a lot of value.

Maybe perhaps longer-term, there's virtual and augmented reality — those could be a huge driver if they take off.

**Kotay:** I think the Internet is experiencing a lot more social video as a form of communication. This includes things like Facebook Live, Periscope, Vine,

quick clips. I think we're still pretty far from video not being the bulkiest thing we carry, but we are seeing a rise in other forms. The good news is that compression improvements can help offset that.

Other things we're seeing, with the preponderance of smartphones and devices, are more firmware updates. They're bursty, but they can be materially significant. When a new game launches, that can be a big, bursty thing. Video is more consistent. It's bulkier, yes, but more consistent and predictable.

So if you look at downloads, entertainment video will be a huge chunk for the next few years. However, as far as peak demand, we'll likely see a continued rise in firmware updates and games — things happening in the background.

**MCN: What's the situation around the possibility of widening the spectrum above 1.2 GHz? Is it time to raise the roof around here?**

**Hart:** I think in the near-term we're in good shape without having to widen. It's something we're always evaluating and reviewing. If you're going to be making some enhancements to the network, it makes good sense to try to future-proof it, but probably not here in the near term on that particular component.

**MCN: Widening the upstream path: How do you think through when it's time to do so? What's the situation now?**

**Hart:** The good news is that a fiber deep strategy helps to address some of the upstream bandwidth by decreasing the service group size. That's going to buy us a little more runway than we had thought when considering mid-splits and high-splits options.

For now, we're in pretty good shape with our strategy. With the mid-split maneuver, you've got a massive CPE implication; that's where a ton of costs could be. I think we're in pretty good shape today with our N+O strategy.

***IN THE HOME***

**MCN: RDK, the Reference Design Kit, has a new profile:  
Broadband. What should people know about it?**

**Nair:** The RDK started with video. The RDK is expanding, so it got segmented to “RDK-V.” The next one is focused on broadband, which is why you hear about “RDKB.” It’s a little tricky because the letters “V” and “B” sound very similar when spoken!

Regardless, RDK-V is how we got to a user experience that satisfies, on many levels. Comcast started it with X1. We’re onboard, so is Cox, Shaw [Communications] and a growing global footprint. RDK, no matter the letter behind it, is the for-real open source platform behind the platform.

RDK-B reinforces connectivity being king. Everything we deploy will be RDK.

**Hart:** I think RDK-B has a lot of the same promise [as RDK’s video profile] in terms of speed to market, good economics in terms of the open source and keeping it open to multiple vendors.

The other piece is the functionality and capability to do remote installation and monitoring and repairs, and some of the tools ... will be a differentiator. And with the new tools coming out, ease of use is another big benefit of RDK-B.

**Kotay:** It’s this — broadband is a two-way network, but as an industry we’ve been relatively blind to the connectivity in the home. The feature sets for routers and broadband devices have been relatively static for 10, 15 years.

It’s analogous to video services, in a way: It used to be all about channels. Channels are still important, but there’s a lot more to it. Same thing for broadband: It used to be all about speed. Speed will continue to be important, but it becomes more than just that.

Things like RDK-B will be central to be able to understanding what’s going on, and responding to that understanding. Whole-home WiFi is a good example: It’s about putting a lot more visibility and tools into the hands of our customers.

**MCN: Kevin, give us an update on where Cox is with the RDK video profile [Cox's new Contour platform uses the RDK and syndicates Comcast's X1 platform]. Any shareable Net Promoter Score or other metrics or anecdotes? In NPS parlance: Would you recommend it to a friend?**

**Hart:** It's been a huge success for us. We're, of course, partnered with Tony [Werner, president, technology and product at Comcast] and his team. But it's also what we've done to enable it for ourselves. We probably did two to three times the amount of integration work on this.

It's definitely been a home run. In the first couple of months, we've already [surpassed] 400,000 subscribers. We're moving quite rapidly in terms of our deployment relevant to our initial plans and expectations. And the customer feedback has been off the charts. The NPS is multiples in terms of some of the other legacy platforms that we have.

The ease-of-use has had a nice halo effect, much like G1GABLAST had for our Internet service. Within just a few months, we've been able to achieve the same overall level of performance of the platform around tuning, etc., that it took Comcast and many others many years to achieve. We get some of the benefits of their learnings, but we've been able to do that within our ecosystem.

**MCN: What's your approach to devices — those you provide and those customers bring and attach to you?**

**Kotay:** If you went back four, five years — that's when we started looking at having to build software and apps as more of an opportunity than a burden. Over the past two or three years, we've had the same shift with hardware. In our industry it used to be, oh, we have to provide a box, to do conditional access and some navigation, and we have to provide a cable modem, to do HSD [high-speed data].

It reminds me of [astronaut] Alan Shepard, when he was sitting in the spaceship, ready to take off, and was asked what he was thinking. He said he

was thinking about “the fact that every part of this ship was built by the lowest bidder.”

The funny part was, while we were thinking that way, a lot of innovative companies were devoting a lot of effort to getting devices into the living room where we already had a foothold. I think it made all of us sit up and say: What if it’s not just about having product for an ISP or a cable provider? What if it’s about making the best product, period?

In the last couple of years, we’ve gotten a lot of religion about that and we’re seeing the rewards, in terms of customer satisfaction and retention with products like X1 and our X1 voice remote. Over the next year, you’ll see us continuing along that path with products like our Xi5 wireless set-top box and XB6 home gateway. The goal is simple: make products people love.

## ***OUTSIDE OF THE HOME***

**MCN: How do you answer this question when your bosses ask it: What does 5G mean to us?**

**Nair:** It means highly distributed, small cells with a mix of licensed and unlicensed spectrum. In some ways, it’s a credible threat. In other ways, it’s an opportunity. It’s an opportunity because it’s coming out of mobile and all those small cells will need backhaul. We do backhaul. Ultimately, it’s a hype bubble at the moment — we think it’s more of a 2020 thing.

**Hart:** As you know, the majority of wireless traffic is facilitated by wireline, so there’s a lot of backhaul opportunities for us to partner with our carrier customers. As that becomes more prevalent and that becomes more pervasive, they’re going to need to leverage networks like ours and others in the MSO community.

As it related to leveraging it as a last couple of hundred of feet fixed wireless methodology, we’ll have the same opportunity to take advantage of that, particularly with some of the remote PHY components. We could potentially leverage some of that infrastructure with strand-mounted small cells as well.

There's definitely a place for 5G and we think it's both an opportunity that can help with the backhaul but also even potentially leverage ourselves. And we feel that the product that we already deliver is very competitive and will continue to stay ahead of the performance from a throughput and speed and connectivity standpoint.

**MCN: Enterprise services: What's the hot seller to commercial businesses right now? What does it take to go after the large enterprise crowd — to roll up the sleeves against Verizon and AT&T and the like?**

**Hart:** We still have plenty of opportunity within the small-to-medium businesses within our footprint, so we're continuing to stay focused there. Our IP Centrex hosted voice solutions are selling great right now. We've also got great opportunity with schools, government, our hospitality network and convention centers, and we're looking to go a bit further upmarket over time. In many cases, there are probably opportunities to partner with other MSOs, because many of those larger enterprises span multiple geographies, sometimes not always directly within our footprint.

**Kotay:** Business services is a major and growing segment for us, and a focus for a lot of really cool innovation on the product side. As just one example that I'm excited about, we've been putting a lot of effort behind cloud enablement. Mid-market and enterprise customers, in particular, need bandwidth and solutions engineered to enable their move to cloud services.

Earlier this year, Comcast Business announced that it is providing businesses with direct connectivity to Amazon Web Services, which, as we all know, is one of the leading providers of cloud services in the world. As that group continues to move upstream and serve large, national enterprises with dispersed office locations and data centers, you'll continue to see them make more news with major cloud providers.

**Nair:** It depends on the size of the business. In general, small and medium businesses are really interested in a high-quality, dedicated IP interface, in the range of 500 Megabits per second to a Gig. It goes on from there to hosted voice, layer 3 VPN, and eventually to an SDN-type solution.



## ***IN THE CLOUD***

**MCN: What are the important elements in building a video cloud — dos and don'ts? Where is each of your respective companies, with respect to a cloud-based video offering?**

**Nair:** I'll go with "do" rather than "don't." Do pick the right vendor. Two, make sure the vendor isn't bullshitting you. Third, do make sure the vendor delivers.

Our path to cloud-DVR started with putting the navigation in the cloud. Then we put VOD in the cloud. Third is putting DVR in the cloud. That's the progression that's worked for us.

**MCN: Kevin, you have options for the new Contour. Any plans underway to enable a cloud DVR service?**

**Hart:** It's on our product roadmap for next year. That being said, there's been some mixed results in terms of customer uptake on the platform. Some of the things we're working our way through are the content and the copyright components with some of the content providers. We're still trying to work some of those models out.

The other piece is the economics. Setting up our own specific cloud DVR solution, the economics would be a little steep. We're looking at a couple of different partners to provide some flexibility there. Some of the economic models from Cisco [Systems] and some other providers are becoming a little bit more nimble, agile and affordable and more "by the drink," if you will. I think there will be some advances ... that will allow us to make more progress on it. We're evaluating it.

**MCN: Where are you with virtualization, generally or specifically?**

**Kotay:** I think virtualization has gotten fetishized. It's not an answer to all problems. It's a critical tool in the toolbox, yes. But, for example, some of the stuff we're doing around containers isn't virtualized, because they don't need

to be. There's no elasticity in that workload, so, the less layers and complexity, the better.

Virtualization is important, and we need it in some areas, but it's not the only tool. Of course, in some areas, virtualization technologies can deliver powerful benefits in terms of network performance and reliability. We've been pushing more programmability into the network for years, and have seen the benefit of that approach.

**Hart:** We are making a lot of progress on our virtualization plan, virtualizing from a hardware and software perspective and software-as-a-service and becoming much more nimble in terms of the things we do on a cloud-based way in which we leverage technology and leverage our products and services.

**Nair:** At a core level, we're looking at SDN [software-defined networking] and NFV [network functions virtualization]. Both have significant and practical benefits. Benefits like providing dynamic bandwidth: clearly important. What comes with that tends to be economic and efficiency gains. That said, we do understand the challenges virtualization poses to our key vendors.

**MCN: DevOps — What is it, why does it matter, and to what extent are your companies pursuing it?**

**Hart:** We were working some DevOps opportunities last year, but we kind of went all-in earlier this year. We did a bit of an organizational realignment to create a true DevOps team that combined all of the development and IT operations team, and co-located a lot of our business stakeholders.

The speed-to-market, the learning, the quality, the feedback we're getting from our stakeholders has exceeded my expectations in terms of the way our teams have embraced it and what they've learned from their counterparts that are now part of their same team members, and just the pace and scale and quality of what we're delivering around multiple platforms. I actually thought there would be a bit more of a resistance, culturally, from the teams, but it's been embraced.

We're extending it not just to our traditional technology DevOps model, but we've had some major data center moves, so we're applying DevOps methodologies to physical moves as opposed to just some of the virtual and technology development and making it more of a mindset in how we do business.

**Kotay:** We're huge on it. There are two or three reasons why it matters. The biggest is, it creates the right culture of autonomy and accountability. Put another way, the people who cause the pain have to deal with the pain!

The rate of change is only increasing, so the whole idea of sequential handoffs — formally document your requirements, formally hand them off to the design group, which hands off to the engineering group, which does the test cases and hands it off to QA, then to integration and test, then to deployment, then to support — there was a time and a place when that made sense. There are still cases where it makes sense, actually — hardware work is still very much a “waterfall.”

But being there on the DevOps side, supporting the triage elements that come with RDK-B, and being deeply involved all the way through product and process ... DevOps still blows my mind. It changes everything, with everything that means. We wouldn't be where we are without it.

**Nair:** DevOps matters if you've adopted an agile software methodology, and you're building a lot of your own code. In other words, if you've decided to own your stuff. If you choose to do your own build framework and you're writing code — because you want transparency and control of whatever your situation is — then the model works.

### ***CLOSING QUESTION***

**MCN: What disruptors or potential disruptors are on your radar right now?**

**Hart:** For the disruptor component, it's about keeping our eye around 5G in the fixed wireless space and how do we capitalize on that emerging technology, particularly around MDUs and commercial businesses?

It's not very glamorous, but regarding special projects, it's about working on process excellence and customer experience and putting the right set of tools and customer self-care and navigational flows within our call center and field services. It's a lot of process work, but we've got to codify that within some of our technology tools. It can help to distinguish ourselves and continue to separate from some competitors.

**Kotay:** I'll take "potential disruptors," in the context of the Internet of Things. I find it interesting that at this point in 2016, IoT [the Internet of things] still has so much headroom to grow. And that growth, when it accelerates, will create interesting dynamics.

If you think about the connectivity axis and look at power consumption, bandwidth and range, there's an interesting gap. For lack of a better term, call it the narrowband space, for instance. It creates an environment for things with aren't hard on batteries and very long range, in terms of miles. Their bandwidth requirements are medium at best, like for M2M [machine-to-machine communications]. I don't know if it's disruptive, but it feels like there's something interesting there.

Another I'm still constantly watching are display surfaces. They're also ripe for disruption, more in the five-to-eight-year horizon. I don't know if it's flexible displays or cheaper displays, but it feels like we'll have a lot more screens in our lives, and not just mobile. Fixed screens too.

**Nair:** I'll take disruptors. Primarily, disruptors really are those competitors who aren't interested in profitability — for five-plus years. That's a long time. <http://www.multichannel.com/cable-tech-crossroads/407980>

**Multichannel News**

# Flipping Video's IP Switch

Adara leans on switched video to help ops migrate to IPTV 9/26/2016 8:00 AM Eastern

By: [Jeff Baumgartner](#)

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*Joseph Nucara, Adara CEO/cofounder: "We changed the purpose of switched-IP video, It's not just for long-tail [content] anymore."*

Switched digital video is not a new technology, but Adara Technologies, a supplier that's been focused on independent cable operators, has added a new wrinkle that could help those providers migrate to IP video without breaking the bank.

MSOs such as Cablevision Systems (now part of Altice), Time Warner Cable and Charter Communications have used SDV for years to conserve bandwidth by putting lesser-viewed networks on "switched" tiers. The idea is to send a multicast stream of a specific channel or network only when a viewer in a given service group selects it for viewing. Once that stream is nailed up, others in the service group can tune into that stream. The multicast stream is then torn down when no one is watching that channel.

But Adara has taken SDV to the next level, enabling cable operators to deliver their full video service — not just the long-tail stuff — in a switched environment. The company recently carved out that switched-IP solution as a standalone product.

Adara has plenty of company in that arena, though. Evolution Digital, for example, is pitching National Television Cooperative members and other independent operators on IP video transition strategies that center on its new eVUE-TV platform.

Adara has expanded beyond its early reliance on a Cisco-centric offering to support multiple vendor platforms and set-tops, including products from equipment makers such as Arris and TiVo.

“We changed the purpose of switched-IP video,” Joseph Nucara, Adara’s CEO and cofounder, said. “It’s not just for long-tail [content] anymore.”

Under Adara’s approach, an operator can set aside channels that are typically used for broadcast TV to the new switched-IP video QAMs. Legacy set-tops, meanwhile, are preserved by embedding software from Adara that allows those devices to support the new IP-based multicast video streams.

Because new boxes aren’t required, “It’s extremely non-intrusive to the subscribers,” Nucara said.

He estimates that deployment requires freeing up eight to 24 6MHz-wide channels, depending on how much headroom the MSO needs to accommodate capacity demands.

“It’s like bandwidth on demand,” Nucara said.

Adara’s system monitors usage in real-time, and is designed to flag the operator when available bandwidth usage for the IP switched offering nears the 80% mark on a consistent basis. That, Nucara said, tells the operator when it needs to add capacity to those service groups or subdivide them.

Because that spectrum is now used to deliver IP-style “switched” technology, operators can support “unlimited content” in a smaller swatch of bandwidth, and can use reclaimed bandwidth for other needs, such as DOC SIS 3.1, Nucara said.

He said the same process could also support 4K video services, as MSOs look to take advantage of the new pixel- packed format.

Adara hasn't broken down the exact costs of its system, but Nucara said a typical deployment requires about half a rack of equipment in the MSO's headend, plus the new SDV components.

While Adara doesn't preclude Tier 1s from using the platform, it has been taking hold mostly with small- and mid-tier operators, including Cass Cable of Central Illinois; CCAP in Quebec City and Cable Cable of Ontario, Canada; Cablevision in Warwick, N.Y.; Darien Telephone in Georgia; and Fayetteville Public Utility in Tennessee.

Nucara estimates that more than 75 operators are using Adara's technology. He also thinks that the switched IP video component will draw the attention of larger, Tier 2 MSOs.

<http://www.multichannel.com/flipping-video-s-ip-switch/407983>

**Multichannel News**

# Milestones for Reelz CEO Stan Hubbard: Network Turns 10, License Fees Kick In

9/26/2016 8:00 AM Eastern

By: [Kent Gibbons](#)

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The **Reelz** network — privately owned by a **Hubbard Broadcasting** subsidiary — turns 10 on Tuesday (Sept. 27). It launched in 2006 with access to about 30 million homes and has grown that reach to about 70 million today. Two years in, it moved to Albuquerque, N.M., from Los Angeles to save money. CEO **Stan E. Hubbard**, who moved there, too, from the Minneapolis area, told *The Wire* last week “we haven’t looked back.”

Reelz has to keep overhead down, he pointed out, because the only revenue coming in is from ad sales (which he said are up 600% over the past five years). “Every penny of that and more has gone on the screen,” Hubbard said. “My family, we’re the ones that have been funding this business. We’ve not turned a profit yet. But when you’re a family business you can think generationally.”

Hubbard Broadcasting, founded by grandfather Stanley E. Hubbard and chaired by father Stanley S. Hubbard, started in radio in 1925 and now owns 14 TV stations and 48 radio stations.



Next year will see another big milestone: Reelz's deals call for a license fee to kick in, per Hubbard, who said it's a very small one that's been a long time coming.

“When we launched, we told all of our distributors, ‘We’ll be back. We believe in what we’re building — give us a chance, we’ll earn it.’ And I think for the vast majority of our distribution, they recognize it, and we’ve earned it and we’ll come into January and just keep moving along.”

According to Reelz, several unannounced distribution renewals have been done over the last year to 18 months, including deals with **DirectTV, Dish Network, Comcast** and **Charter Communications**. Hubbard said he's continuing to look for improvements in such basic areas as channel position, high-definition carriage and packaging.

On DirecTV and Dish, where it's carried in HD on favorable channels, it's a top 50 network, versus ranking 68th overall, according to the company. Only about two-thirds of Reelz's overall carriage is in HD, Hubbard said.

Given some carriage sweeteners, Reelz could be a top- 50 network overall, he contends. And if it could break into the top 40, “probably with the lowest rate in the business, we have an extremely successful business.”

Key moments for Reelz were opportunistic pickups of the A&E-scrubbed miniseries *The Kennedys* in 2011 — Reelz has a sequel of sorts, *The Kennedys – After Camelot*, starring **Matthew Perry** (as Ted Kennedy) and **Katie Holmes** (reprising her role as Jackie Kennedy), planned for April 2017 — and of the Miss USA pageant in 2015. Hubbard said the new Kennedy miniseries “is going to be one of the highest-profile, best things people are going to see next year.”

Since airing Miss USA, Reelz has shifted to more female-skewing programming and packed its schedule with pulpy fact-based shows centered on Hollywood and celebrity scandal. This summer it renewed five series and greenlit 15 new ones, including *Rich and Acquitted*, *Hollywood Homicide Uncovered* and *Scandal Made Me Famous*.

One disappointment for Reelz: **Cox Communications** has never carried the network, even though Baton Rouge, La., a Cox market, was the Miss USA pageant's host city in 2015. Reelz also has actively solicited aid for Baton Rouge since the recent floods. "[Cox] missed 10 years of free, but somewhere along the line they're going to have to see this network is actually here to stay, and we'll get something done," Hubbard said.

### ***NCTA, Dairy Barns And Combat Boots***

The Wire came across some fascinating facts about the NCTA's origins while doing research for last week's story about the **National Cable & Telecommunications Association's** rebranding to **NCTA: The Internet & Television Association**.

For example, during the Yi dynasty in Korea, which lasted from 1392 to 1910 (when they say dynasty, they mean dynasty), the official court religion was Confucianism.

For those who may be confused, that was one of the top entries returned from an online search for "origins of NCTA," and was from the history of Taekwondo from the **National Collegiate Taekwondo Association**, which may or may not be changing its name to NCTA: The Intercollegiate & Taekwondo Association.

For those who wondered why those dairy barns had been converted into classrooms in the fall of 1968, it was the beginnings of the NCTA — **Nebraska College of Technical Agriculture**. Dean **Weldon Sleight** helped come up with the "Combat Boots to Cowboy Boots" program, by the way. Not to be confused with **John Malone's** "Cowboy Boots to World Domination" program.

Then there is "**NCTA-Ohio State**," which sounds like it should appeal to alumnus Tom Wheeler. The FCC chairman has a hard time not citing his alma mater at every opportunity, and even when no opportunity appears to be presenting itself — although "NCTA" has not been coming as trippingly off the

tongue during the current set-top set-to as when Wheeler was president of the association. In this case, the NCTA that is teaming up with “The” Ohio State is the **National Consortium for Teaching about Asia**.

Then there is the **National College Testing Association**. If that NCTA testing includes teachings about Asia, we know at least one answer: Confucianism was the official religion of the Yi dynasty.

Isn't this where we came in?

— *John Eggerton*

### ***WICT Confab Ends in Gold for Joyner-Kersey***

On the field, Olympic track champion Jackie Joyner-Kersey was a hardened competitor who won six medals — three of them gold — in several track and field events over four Olympics from 1984 to 1996.

But Joyner-Kersey showed her softer side during the **WICT Leadership Conference** opening general session last Monday (Sept. 19). Joyner-Kersey, who spoke compassionately about giving back to her community in East St. Louis, Mo., through her self-named community and technology center, tried to fight back tears after fellow session keynoter **David Cohen, Comcast's** senior executive vice president and chief diversity officer, surprised her with the promise of a major technical upgrade to her community center.

Comcast, along with St. Louis-area cable provider **Charter Communications**, will provide the center with 20 new computers, a 3-D printer and an interactive Promethean Board touch screen. Charter will also provide free WiFi for the entire center, Cohen said.

Joyner-Kersey told The Wire: “What David, Comcast and Charter did was truly a blessing. The access to services that we'll be able to provide is crucial for low-income families in our community.”

— *R. Thomas Umstead*

<http://www.multichannel.com/milestones-reelz-ceo-stan-hubbard-network-turns-10-license-fees-kick/407990>

Multichannel News

# FCC Set-Top Rules Rocked in D.C.

Wheeler says rules are 90% there, but concedes issues remain 9/19/2016 8:00 AM Eastern

By: [John Eggerton](#)

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WASHINGTON — Federal Communications Commission chairman Tom Wheeler's pivot toward apps-based set-top box rules is still very much a work in progress.

By press time last week, programmers, app developers, ISPs, advertisers and even Amazon had flashed warning signs at Wheeler, and Senate Democrats had urged him not to rush into a scheduled Sept. 29 vote, relaying stakeholder concerns about the impact of the rules on content, contracts and the copyright regime.

Wheeler pledged to stick to the timetable and refused a bipartisan request from legislators to publish the text of the item. Meanwhile, the White House provided its support to the new plan.

Set-tops were the issue du jour at a Senate Commerce Committee oversight hearing where Democratic commissioner Jessica Rosenworcel added her voice to the chorus of questioners, putting an exclamation point on the pushback, if not quite a nail in the coffin.

## ***PROBLEM WITH LICENSING SCHEME***

At the hearing, Wheeler twice quoted Rosenworcel's comment about the need to act on set-top reform for the sake of consumers, seeming to provide a public prod for action.

But when asked for her take on the set-top plan, Rosenworcel said that while set-tops are clunky and expensive — she said that was her personal as well as professional position — she has problems with the FCC getting “too involved in licensing schemes,” adding that she did not think the FCC had the authority.

She said she thought there is a workable solution, but also signaled it would take more work.

Democrats in both the House and Senate publicly professed their concerns with the set-top plan, following efforts by Wheeler’s staff to get them on board in meetings the previous weekend.

Those included Senate Commerce Committee ranking member Bill Nelson (D-Fla.), House Energy & Commerce Committee ranking member Frank Pallone (D-N.J.) and even vociferous cable and set-top critic Sen. Claire McCaskill (DMo.).

“I’ve never seen a unanimous opposition from providers, programmers and the creative community,” McCaskill said. “Usually in this chair, they’re on different sides. They’re all unified in their opposition to this.”

Wheeler pointed out that the Writers Guild of America West, at least, was on his side.

Republicans are even less sanguine about the proposal, as they have been from the outset.

Wheeler told the senators he was willing to continue negotiating — he will need to get Rosenworcel on board — and would even drop at least one provision related to MVPD- programmer contracts — one he said programmers had themselves pushed for — if it would help.

Wheeler conceded the item was only about 90% there, but seemed confident he could get the other 10%.

McCaskill said she was glad he acknowledged the rules were not there yet.

## ***COPYRIGHT PROTECTIONS***

Wheeler defended the FCC's approach to copyright protections in the set-top item.

“What the commission is trying to do,” he said, “is not to write copyright policy, but to write a policy inside its authority which does not interfere with existing copyright authority and with the contractual terms that copyright holders do inside that authority.”

Saying he would be working with his colleagues to try to lock down the item, Wheeler maintained that it was not the FCC's goal to “become a judge of the contracts between MVPDs and programmers.”

If Wheeler does not get Rosenworcel's vote, he could always issue a further notice of proposed rulemaking and seek comment on the new proposal. That would take care of critics who say the FCC should have provided more notice and time for comment on its switch to the new plan.

Standing up for Wheeler's proposal was Sen. Ed Markey (D-Mass.). He held up a set-top wrapped in chains and compared that with an Amazon Fire Stick the size of a pack of gum. Markey said the box had not changed and that 100 million pay TV households can't watch their pay programming on the Fire Stick.

He said only the FCC can do something about the problem, and that its proposal would free consumers from exorbitant rental fees, adding, “That lack of choice has to end now.”

<http://www.multichannel.com/fcc-set-top-rules-rocked-dc/407805>

Multichannel News

# New Set-Top Box Targets Seniors

**SentabTV adds photo sharing, video calls to TV for social media-challenged older viewers** 9/19/2016 8:00 AM Eastern

By: Chris Tribbey, Broadcasting & Cable

Share<sub>3</sub>

During the VCR's heyday, the overused joke was that grandma just could never figure out how to get that blinking "12:00" to turn off. Today, more devices than ever are attached to the TV, including ones aimed specifically at getting people age 65 and older to keep in touch with family and friends while also watching their favorite TV shows.

One such device is becoming available on Amazon as of Sept. 19 – the \$149 SentabTV, a device that promotes features including photo sharing, video chats and phone calling and an emphasis on making social media easier for a demographic that usually isn't inclined to use Facebook and the like.

According to U.S. Census data, by 2040 there will be 82.3 million Americans 65 and older, and it's a digital market that's been largely ignored, according to Gordon Schenk, California-based senior VP of business development at Sentab, a European firm.

"The demographic watches live linear programming 78% of the time, and our solution...allows the individual to watch their existing [pay TV], with the social features overlaid on top of that, and also be connected to family, friends and caregivers," Schenk told Next TV. "One of the neat features of our digital media player, compared to the Roku and Apple TVs out there, is we have a patented feature set where you don't have to switch any inputs. Once the box is installed...you never have to switch inputs again, and watch TV as you normally would."

Existing live, linear cable, satellite and telco services can be connected via HDMI cables to the SentabTV, and a \$10 monthly subscription adds services including making audio and video calls directly from the TV; photo and video sharing; a newsfeed; games that specifically target cognitive retention; and an online community and marketplace section.

“We have a perceived gap in social media that relates to the senior community,” Schenk said. “If you look at the numbers for Facebook, 65 or older is almost in the single digits. Being able to get a creative way for them to be social is our focus.”

Sentab said some senior residency groups in the U.S. are testing the set-top and services. Future add-ons could include health and fitness tracking via Bluetooth, Schenk said.

<http://www.multichannel.com/new-set-top-box-targets-seniors/407814>

**Multichannel News**



# The Smart Bet?

# Smartphone Growth

9/19/2016 8:00 AM Eastern

By: [Jeff Baumgartner](#)

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Digital's surging growth can be attributed to the use of a wide range of devices, but the smartphone is leading the pack by far when it comes to the rate of growth.

Smartphone apps accounted for about 80% of all growth in digital media from June 2013 to June 2016, according to comScore's latest *Mobile App Report*.

The study, based on measurement of comScore's Media Metrix Multi-Platform reporting system and survey results from more than 1,000 smartphone users, also found that smartphone apps now represent nearly half of all digital media time and three out of every four minutes on mobile in aggregate.

While mobile app usage is growing among all age groups, the rate of growth, perhaps surprisingly, is highest (37%) among people age 55-64.

Meanwhile, tablet usage over the past year has dropped across the board, and the most (-35%) in the 35-44 age group.

Facebook and Facebook Messenger were the top mobile apps (in terms of unique visitors), followed by YouTube, Google Maps and Google Search.

It's a different picture among millennials (age 18-34). The top apps, among those with more than 1.5 million users in that age group, were Yik Yak, PlayStation, Venmo, Twitch and Vine, MeetMe, GroupMe and Tinder.

<http://www.multichannel.com/smart-bet-smartphone-growth/407815>

Multichannel News

# Wheeler's Shell Game With Set-Top Box Rules

9/19/2016 8:00 AM Eastern

By: Adonis Hoffman

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Long a favorite of street hustlers, carnival hawkers and con men, three-card monte is one of the oldest games around. According to Wikipedia, three-card monte is a confidence game in which the victim, or mark, is tricked into betting a sum of money on the assumption that they can find the “money card” among three facedown playing cards. It is the same as the shell game except that cards are used instead of shells. The chances of a mark winning are almost nil against a skilled con artist.

In an eerily similar rendition, Federal Communications Commission chairman Tom Wheeler has served up a “compromise” rule on set-top boxes. After the original proposal was met with overwhelming opposition, Wheeler retreated and reconfigured a new version of the same old rule. Much like the dealer in three-card monte, Wheeler has changed the game to appear responsive to the players when, in fact, he still holds the “money card.”

What makes both of these games so interesting is the high level of legerdemain required to pull them off successfully. At the FCC, chairman Wheeler has become adept at the art of appearing to be sensitive to the public. Remember the about-face on net neutrality after listening to the four million comments from the public? The same sensitivity has been attributed to the chairman's stance on media ownership, mergers and privacy. And then there is the illusion of inclusion the chairman paints when it comes to all things diversity. But these are matters best left to another discussion.

Front and center for today is the set-top box rulemaking, which is set for a decision at the Sept. 29 meeting of the FCC. Sparing the technicalities, here is the bottom line: The new set-top box rules, as proposed, would indelibly change the advertising, content and programming ecosystem that today allows for commerce, copyright and creative protections in the delivery of video on pay television. Stakeholders from Hollywood to Capitol Hill have decried the chairman's defiance of long-held intellectual property and privacy principles, and his deference to the new technology robber barons on an issue of such consequence to both industry and consumers.

In a polite, but poignant, exchange, both Democrats and Republicans expressed concern in Thursday's (Sept. 15) Senate Commerce Committee oversight hearing. Ranking member Sen. Bill Nelson (D-Fla.) highlighted lingering contradictions on both copyright and content. Sen. Claire McCaskill (D-Mo.) noted that she had never seen such unanimity of opposition from providers and consumers, who do not usually agree. Other senators raised similar concerns over FCC jurisdiction in privacy, copyright and authority to get involved in a federal licensing regime.

In question after question, the senators wanted to know how flexible Wheeler might be in forging a meaningful compromise on set-top boxes. After all, there is universal agreement that consumers demand cost relief, and the market demands competition, as contemplated by Section 629 of the Communications Act. In answer after answer, the chairman nodded to the principles of competition and consumer choice, but appeared steadfast that his approach is best. Earlier, committee chairman John Thune (RS. D.) pointed out that Wheeler has presided over more divided, party-line, votes in three years than all other commissions in the previous 20 years combined. This, alone, would contend for the erstwhile Dubious Achievement Award.

To be fair though, chairman Wheeler has ushered in several noteworthy regulatory developments during his tenure. Although stalled at a less-than-successful stage, the spectrum incentive auction could result in a new inventory of wireless capability, which, when coupled with progress on 5G, will bring wonderful things to the consumer market. Although contentious,

the Lifeline Modernization Program is regulatory rulemaking that's clearly in the public interest. And, the chairman deserves kudos for his initiative and leadership on security, global and emergency issues across all communications platforms.

It seems chairman Wheeler has the same problem as President Obama when presented a choice to sacrifice existing industries with proven track records in favor of newer, sexier and techier entrants. Broadcasters, cable and telcos have been on the losing end of many of Wheeler's most significant rules, as opposed to tech. And this has led to criticism of an anti-business — or at least anti-incumbent — bias.

When it comes to the rules on set-top boxes, the growing chorus of content creators, distributors, programmers, advertisers, manufacturers, copyright and privacy advocates deserve a straight answer responsive to their demonstrably legitimate concerns. The chairman has all the cards in hand to toss out a compromise that will allow every player in the set-top game to walk away from the table a winner.

*Adonis Hoffman is chairman of Business in the Public Interest and an adjunct professor at Georgetown University. He is the former chief of staff and senior legal advisor to FCC commissioner Mignon Clyburn and author of Doing Good — the New Rules of Corporate Responsibility, Conscience and Character.*

<http://www.multichannel.com/wheeler-s-shell-game-set-top-box-rules/407808>

**Multichannel News**

## **CenturyLink Hints That OTT Will Become Bigger Part of Video Expansion Effort (Fierce Telecom)**

A CenturyLink executive hinted that the provider's evolving over the top (OTT) video offering could be the main method it will use to expand its video service presence in markets where it currently does not offer IPTV.

Stewart Ewing, CFO of CenturyLink, told investors during the Bank of America 2016 Media, Communications & Entertainment Conference that the OTT offering could readily address more customers with video services.

“We would potentially have an offering that will roll out much broader than the roll out of Prism today,” Ewing said. “Prism helps in the stickiness of the customer and brings broadband along with them in 95 percent of the cases and we think the over the top product can help as well in terms of helping us expand the footprint we have outside of the agreement we have with DirecTV.”

<http://www.fiercetelecom.com/telecom/centurylink-hints-ott-will-become-bigger-part-video-expansion-effort>

**STATEMENT FROM CHAIRMAN TOM WHEELER, COMMISSIONER MIGNON CLYBURN AND  
COMMISSIONER JESSICA ROSENWORCEL**

**ON THE SET-TOP BOX PROPOSAL.**

WASHINGTON, September 29, 2016 – *The Set-Top Box Order has been removed from the September Open Meeting Agenda. The proposal will go on the Commission’s circulation list and remain under consideration by Commissioners.*

“It’s time for consumers to say goodbye to costly set-top boxes. It’s time for more ways to watch and more lower-cost options. That’s why we have been working to update our policies under Section 629 of the Communications Act in order to foster a competitive market for these devices. We have made tremendous progress – and we share the goal of creating a more innovative and inexpensive market for these consumer devices. We are still working to resolve the remaining technical and legal issues and we are committed to unlocking the set-top box for consumers across this country.”

**Sept. 29, 2016**

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### **Set-Top Box Proposal Pulled From FCC Meeting**

It appears FCC Chairman Tom Wheeler could not secure the three votes needed for his set-top revamp proposal, at least not yet, with the agency announcing 20 minutes before the public meeting that the vote had been removed from the agenda. John Eggerton reports.

[Read more>>](#)



# Why TV Is Going to the Apps

How cable operators are transforming the TV experience through apps 8/29/2016 8:00 AM Eastern

By: [Mike Farrell](#)

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*Dish Network's Dish Anywhere app offers subscribers access to live, on-demand and downloadable content choices.*

Digital apps, born on mobile phones and nurtured by a nation of finger-tapping millennials, are about to change TV.

The data-packed buttons that dominate the first screens of most smartphones and tablets are about to comprehensively change the way most Americans access video entertainment.

That transformation is already happening, as cable, telco and satellite operators move to consolidate functionalities into their main apps. Eventually, with the proliferation of smart TVs, they'll look to deliver their entire TV and Internet product suite through their own app, virtually eliminating the need for set-top boxes.

That could be a sea change for the business, as cable operators spend billions of dollars per year on new set-tops and box maintenance. But it's a shift that could take several years as the cable network moves toward Internet protocol-based technologies.

The key is the set-top box, and the timing of its demise. Big operators like Comcast, with its X1 platform set-tops, and Charter Communications, with its WorldBox technology, are rolling out new set-top equipment that should at least have a multi-year lifespan.



Over the long term, though, the industry wants to move in an IP direction. Accelerating that evolution is the Federal Communications Commission's move to bring more competition to the set-top industry by "unlocking" the cable box.

### ***BOXED OUT***

Since the FCC unveiled its plans to make the set-top market more competitive, the National Cable & Telecommunications Association has countered with its "ditch the box" initiative, an apps-based approach that would make cable content searchable beside over-the-top offerings while protecting copyright, advertising, and contractual arrangements with programmers.

Earlier this month, FCC chairman Tom Wheeler said his final ruling will likely include suggestions from the cable industry. Operators have flirted with an app-based content delivery for the past few years, starting with Time Warner Cable's IP trial in New York City with Roku in October 2015.

In April, Comcast announced its Xfinity TV Partner Program, which would extend a bridge to retail devices and enable subscribers to access their pay TV service, including live TV, VOD and cloud DVR recordings. At the same time, Comcast announced a deal with Roku that will bring its authenticated Xfinity TV partner app to Roku streaming players and integrated TVs.

Earlier this month, smaller operators got in on the app act, with tiny Mississippi-based wireless company C Spire announcing that it would make all of its video services available via apps, doing away with traditional set-tops later this year.

The C Spire service would target a wide range of platforms, including Roku players, Amazon Fire TV, Apple TV and iOS- and Android-based devices, as well as select smart TVs.

Teaming up with Mobi TV, C Spire will begin beta testing the service in November, featuring a full linear TV lineup including local broadcast stations, video-on-demand service, DVRs and a seven-day catch-up service.

For cable operators, apps have evolved significantly since they first came on the scene — essentially as a way for customers to use their smartphones as another TV remote. Today, they have become an integral part of the TV experience, offering not only another way to access programming in and out of the home, but a portal to help resolve customer service issues, change the levels of service and perform functions like programming DVRs.

Altice USA executive vice president and chief marketing officer Matt Lake has been deeply involved in app development since the MSO's predecessor, Cablevision Systems, first introduced the Optimum apps in 2011. Since that time, Optimum has added customer- service apps (Optimum Support) and an app to help subscribers find the more than 1.5 million WiFi hotspots located throughout its New York metro area service territory.

“The objective is to make this as easy for customers as possible,” Lake said. “In the world of connectivity, it’s about simplifying complexity. What we’ve found is if there are particular needs for a customer out there, an app can potentially solve that.”

Lake said about 2 million customers have downloaded its Optimum TV, Optimum Support and Optimum WiFi apps since the TV app was first introduced in 2011. Today, on average, customers use at least one of the apps 45 times per month. Customers use the app for everything from watching TV — mostly in-home on different devices — to setting up service appointments and troubleshooting service glitches.

Eventually, the intention is to integrate all of those functions and more into a single app, but Altice USA is likely to take a wait-and-see stance regarding set-top replacement.

Instead, Altice USA sees apps as a means to improve the overall customer experience and to make the company stand out in what is an increasingly competitive environment.

“What we’re trying to do is make sure we have a differentiating experience for our customers and separate ourselves from the competition that is out there,” Lake said. “That’s how we tend to look our development efforts and where we put our investment in terms of the different technologies we pursue.”

But apps aren’t necessarily foolproof. According to The Diffusion Group senior adviser Joel Espelien, there is a hidden danger for distributors that opt to replace set-tops with apps.

“Where this creates pressure for distributors is they will have a hard time encompassing everything into a single app they control,” Espelien said. “MVPDs can ditch the set-top box and create an app that is a virtual set-top box; that is definitely doable. The problem is the consumer has already moved beyond that.

“The MVPD can get rid of the box and get rid of the user experience all together. Then it becomes a billing relationship.”

Espelien added that he sees the app replacement as more of an experimental move, perhaps as an alternative for set-tops that have reached the end of their useful life.

“To do it across the board, I don’t think customers will be with it,” Espelien said. “They will face choices down the road and continue to let set-top boxes age in place.”

Still, other operators are willing to take that risk.

### ***COX ON BOARD***

“Unlock the box” is pushing Cox Communications toward more of an app-only environment, executive vice president of product development and management Steve Necessary said. The Atlanta-based MSO has introduced Contour Flex, a skinny-bundle service that can only be accessed on a mobile device via a specific app. Contour Flex began rolling out in July and is available in the majority of Cox markets, he said.

Cox is “absolutely” behind NCTA’s “ditch the box” initiative, Necessary said, and it’s looking closely at Comcast’s move earlier this year to make its X1 platform available through Roku boxes.

“We are very interested in following that activity,” he said.

“Ditch the box” calls for a single HTML5-based app to deliver service — a simple, one-time approach that has been a long time in coming, according to Necessary.

“From a Cox perspective, it’s never been a question of do we want to have apps and deliver our content more ubiquitously — we always did,” he said. “But what was historically one of the very painful realities is that every one of those apps needed to be different.

“When you started to look at the plethora of smart TVs, the wide variety of OTT-connected devices and game consoles [and] the burden that put on companies like Cox to continue to develop these apps and keep them up to date, you rendered them unfeasible,” he said. “Part of the beauty of this [NCTA] approach, is it’s basically one app. You comply with the specifications of the HTML5 spec and it’ll run. That’s a beautiful thing.”

The Contour app “bears a striking resemblance” to Comcast’s Xfinity app, Necessary said — Cox is licensing the X1 platform for Contour — and represents a “step up” for Cox customers.

“It links the customer to the full Title VI service; it’s the full megillah,” Necessary said. There’s one exception, though: Customers are not allowed to purchase transactional video-on-demand movies or shows through the Contour app.

That’s because Apple requires a “pretty steep” fee for any such purchase made through an iOS app, Necessary said. While the same doesn’t hold true for Android, Cox disabled that feature on the Android app to lessen confusion.

“We didn’t want customers to have a different experience based on the platform,” Necessary said.

But Necessary doesn’t see set-tops disappearing anytime soon. That makes sense, as Comcast and Charter are investing large sums in their respective new box platforms — Comcast has said it expects X1 to achieve 50% penetration of its 22 million customers by the end of the year and rolled out 855,000 X1 boxes in Q2 alone. That investment wouldn’t be abandoned immediately, even in the face of onerous regulations.

### ***EVOLUTION, NOT REVOLUTION***

“It won’t be abrupt,” Necessary said. “If it necessitates buying a new TV in order for that app to work, TVs have a life cycle. What we would expect to see is a gradual erosion of the market. It’s going to take a while before the market is materially affected.”

That could take as long as five years, Necessary said. In its ditch the box proposal, the NCTA estimated it would take at least two years for new technology to be implemented.

While there is a movement to consolidate entertainment and service apps into a one-stop shop for consumers, Necessary said that is not the path Cox plans to take. In Cox’s research, service and entertainment rarely overlap, he said.

“We have consciously said it’s two different experiences; we’ll have two different apps,” Necessary said. “That’s the logic behind it.”

Dish Network director of advanced video products Mitch Weinraub said he too prefers to keep entertainment and service functions separate. The satellite-TV service provider offers the Dish Anywhere app for content and the [MyDish.com](http://MyDish.com) website for customer service issues.

“That’s to not get in their way when what they really want to do is watch content,” Weinraub said. “The right place to do things like upgrades and downgrades is probably on the set-top box. Why bring in another device, log into another service, go through another path?”

“Going forward, we believe there is a right answer there, and that is to let the customer adjust their content where they consume their content.”

With Cox Connect, customers can access the typical customer-service functions: They can upgrade or downgrade service levels, schedule appointments and track technicians. Earlier this month, Cox added a My WiFi feature to the app that helps customers find WiFi hotspots in their area.

About two-thirds of Cox’s customer base accesses at least one of those service capabilities via the Web or the app each month, Necessary said.

“It tells you about the appetite for having digital interactions from a service and support perspective,” he added.

Earlier this month, Cox added another feature to the support app — My WiFi — that gives customers insights into their WiFi service including performance metrics, signal strength and SSID numbers.

“An ever-increasing number of our customers would rather interact mobile-first rather than call or stop by one of our stores,” Necessary said. “It’s just a lot easier.”

It also adds significantly to an operator’s customer service reputation. In the past three years, Necessary said, Cox has seen about a 15-point swing in its Net Promoter scores associated with the digital service.

“It’s a pretty telling measure,” Necessary said. Apps “are one more way to serve your customer in the way they want to be served.”

### ***HIDDEN COSTS***

But there is a cost involved in switching to app-based delivery, mainly in converting plant to IP. That’s something the larger cable operators are already doing to an extent, but it presents a roadblock to smaller operators.

The National Cable Television Cooperative, a programming and equipment-buying group for small cable companies, has been trying to assist in IP conversion and is encouraging efforts to move towards apps.

NCTC president and CEO Rich Fickle said the organization has been very supportive of members' app endeavors, and has also started initiatives to help them move to an IP-based infrastructure, another building block in moving toward delivering content via apps.

"OTT and TV Everywhere apps are through the startup phase and appear to be working well for certain devices and content, [but] apps for mainstream TV viewing including highly watched linear are still challenged and may not be ready for the most highly viewed channels on TV in scale but it will eventually happen," Fickle said.

The main roadblocks, he said, include network loading/quality-of-service management, variations in device processing and memory capabilities, provisioning of localized content alongside national content and variations in supported security and encoding technologies. In the meantime, Fickle said, some set-top boxes might still be needed for a period for many consumers that watch popular content on large screens.

The NCTC continues to be supportive of more innovation in this area. It is encouraging companies to work with the co-op to unlock new benefits such as a seamless multiscreen experience; advanced advertising; near real-time feedback on user experience, features and content; the ability to quickly test new features and content; and flexible packaging based on local viewership data, Fickle said.

But for many smaller operators, apps are more of a vehicle to drive better customer service than deliver content. While many small cable companies have developed their own video content apps, several are opting to leave the entertainment side to TiVo, which agreed to be purchased by Rovi in April for \$1.1 billion. TiVo's app offers a robust feature set including VOD, DVR programmability, and live TV viewing through its own authenticated TiVo app.

At least for now, Mediacom Communications's app focus will be on customer service, senior vice president, customer service and financial operations Tapan Dandnaik said.

About 288,000 Mediacom customers, or around 20% of its subscriber base, have downloaded Mediacom Connect, the mid-sized operator's customer service app. For content, Mediacom uses the TiVo app, Dandnaik said.

Mediacom Connect currently allows customers to manage their account, pay their bill and troubleshoot service issues, but the operator has big plans for the app in the near future. It plans to allow customers to track their technician's location before a service call in the manner of the Uber car-hailing app, and to allow a CSR to activate the camera on a customer's smartphone to take photos of a problem or engage in a video chat with subscribers to walk them through a solution.

Dandnaik said that while app-based delivery of content is an interesting concept, for some the added cost of converting to an IP-based network isn't worth the trouble today.

"It all comes down to what is preferred by the customer," Dandnaik said. "Older customers prefer watching TV traditionally, passively and on a TV screen. Younger viewers are looking at stuff on demand, they watch shows on the go. Anyone can see using apps is more for younger customers. I don't see that changing anytime soon."

### ***SLINGIN' DISH***

For other providers, the set-top is an integral part of the app viewing experience. For satellite-TV providers, some type of receiver is needed to accept signals from the dish. But that hasn't hampered mobility.

AT&T's DirecTV is planning to launch an OTT service, dubbed DirecTV Now, later this year. For Dish Network subscribers, the promise of a fully mobile TV package is reality through its Dish Anywhere app and its Slingbox-enabled Hopper 2 or Hopper 3 set-tops. Using the Slingbox that is integrated into the



set-top, Dish Anywhere customers can access live and on-demand content and can download shows for later consumption.

Unlike other MVPDs that are constrained by rights issues, Dish customers using the Slingbox can access any and all the content they pay for anywhere they can get a wireless signal, as long as their home set-top is powered up.

Weinraub, who runs the team that manages Dish Anywhere, wouldn't say how many customers have downloaded the app or use it regularly, but he said it is growing in popularity.

"The reason it is growing is that we have more and more customers with those boxes that are capable of doing that with the Hopper 2 and the Hopper 3," Weinraub said. "As that audience grows, obviously, there are more people that can take full advantage of the unique capabilities that Dish has.

"As they start to understand it, they may download the app to a device and use it for a specific purpose and then they will realize what they have access to," he said. "Then they become very regular users."

*This story was edited on Aug. 30 to correct an error: Rovi, which is buying TiVo, does not own Roku.*

<http://www.multichannel.com/why-tv-going-apps/407309>

Multichannel News

# Streaming Gets Real Across Devices

Post-PC era is far downstream as usage shifts

elsewhere 8/29/2016 8:00 AM Eastern

By: [Jeff Baumgartner](#)

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Real-Time Entertainment, a category that includes video and music streaming, continues to be the dominant force across all in-home connected devices, according to a new study from bandwidth management specialist Sandvine.

While 45.44% of traffic on Windows PCs originates from real-time entertainment services and apps, that portion of traffic jumps sharply among other devices such as smartphones, tablets, gaming consoles and specialized streaming devices. Of that device group, almost all traffic on Roku devices comes from realtime entertainment.

Sandvine's study — *Global Internet Phenomena Spotlight: Inside the Connected Home* — also found that the post-PC era is well underway as consumers gravitate more time and attention to other types of devices.

Though Windows-based personal computers are still the biggest traffic generator on in-home networks connected to wired broadband services, other types of devices are hot on their tail.

Sandvine, which based its latest study on data collected in July from almost 500,000 North American homes, noted that mobile devices (smartphones and tablets) accounted for 9% of downstream traffic via fixed access networks in 2012, a number that has since risen to 29.3%.

Notably, Sandvine found that, on one network, the top consuming Netflix device (at over 12%) was not a game console or Web browser, but the operator's branded set-top that supports OTT apps.

Sandvine didn't identify the operator or the device, but several U.S. MVPDs, including WideOpen-West, Altice USA's Suddenlink Communications, Mediacom Communications, GCI, Midco, Atlantic Broadband, Grande Communications and RCN, support Netflix on leased set-top boxes. Comcast is preparing to integrate Netflix into its X1 platform later this year.

As a more general finding, Sandvine also found that there are 7.1 devices connected to the Internet for every home with an active fixed access connection.

<http://www.multichannel.com/news/nab-show/streaming-gets-real-across-devices/407318>

Multichannel News

# Wheeler Could Be a Dealer on Set-Tops

Studios say FCC staffers indicate item could move toward MVPD-controlled app 8/29/2016 8:00 AM Eastern

By: [John Eggerton](#)

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*FCC chairman Tom Wheeler has said he plans to put new set-top rules up for a vote by year-end.*

## TakeAway

**With a push from programmers, the FCC may be moving toward a new cable set-top proposal.**

WASHINGTON — Federal Communications Commission chairman Tom Wheeler may have shifted the agency's position on new set-top box rules as he works toward an order he has said he plans to put to a vote by year-end.

His office had no comment, but FCC staff conversations suggest he could be moving toward allowing programming from third parties to remain under the control of a multichannel video programming distributor (MVPD) app. That's according to ex parte conversations from Hollywood studios concerned about protecting their content.

### ***PROGRAMMERS' PUSHBACK***

Wheeler has continued to maintain that whatever the FCC does would honor programming contracts and copyright protections, but programmers have remained skeptical.

Democratic commissioner Jessica Rosenworcel has made it clear that the agency will need to shift gears to get her vote, so a move toward a more programmer-friendly approach could be a way to secure it.

According to 21st Century Fox, The Walt Disney Co. and CBS, in ex parte filings following conversations with top Wheeler aides and other FCC staffers, the meetings were sought by the chairman's office. FCC staff "indicated that they were seriously considering a revised approach to this proceeding that would ensure that all of programmers' valuable content would remain inside of, and under the control of, apps developed exclusively by multichannel video programming distributors (MVPDs) with whom programmers have a direct contractual relationship," the filings said.

Whether cable programming is provided via streams that can be repackaged by third parties or in a separate app that can reside next to others in a search menu has been a major sticking point.

The National Cable & Telecommunications Association describes its approach as "offering a common-denominator app enabling any manufacturer to build a nationally portable device that can receive service from all of the large MVPDs, while continuing to support the market for business- to-business agreements and native apps."

According to Fox and Disney, which made a joint filing on their meeting, "the commission staff stressed that third-party platforms, when distributing these MVPD apps, would be required to honor and abide by all of the terms and conditions set forth in programmers' licenses with MVPDs."

That is the studios' major ask, so a revised approach with such a guarantee could bring programmers into the set-top rule camp. The chairman's office declined to comment on the filings or their importance.

But the programmers also said that any third-party content licensing would have to be negotiated directly with programmers.

The FCC's primary goal, Wheeler has said, is to provide a competitive market for set-tops, given that 99% of boxes are still leased by the cable companies.

A secondary goal, though, is to wed online and traditional video to help make the former a more compelling competitor, another prime component in Wheeler's mantra of "competition, competition, competition."

Even as the programmers were meeting with the FCC, the National Cable & Telecommunications Association was taking aim at the force massed against its in-app approach to providing content to third parties. A spokesman declined to comment on whether or not the programmer filings suggested the FCC was moving closer to NCTA's approach.

"These critics continue to propose complex technology regulations designed to meet their goal of converting copyrighted content into open-source programming for their own commercial use and monetization," the NCTA said. "Their recommendations would undermine copyright as thoroughly explained by the U.S. Copyright Office, violate consumer video privacy, and impose staggering costs on consumers, networks, program diversity, and innovation."

### ***COMPROMISE AHEAD?***

The Computer & Communications Industry Association — whose members include Amazon, Dish Network, TiVo and Google (a driving force behind the FCC's "unlock the box" approach to creating a competitive set-top marketplace) — recently offered up what it signaled was its own, more app-centric "compromise" between the FCC's approach and the NCTA's app-based plan.

But in a white paper filed with the FCC, the CCIA appeared to keep a thumb squarely on the FCC's side with the title *Unlock the Box: How to Address Opposition and Boost Competition*. The CCIA said one solution could be a "digital certificate" for third-party boxes "tied to contractual language pertaining to advertising, channel number preservation, and privacy compliance."

The white paper reads mostly like a defense of the FCC proposal, echoing old criticisms of the NCTA alternative as "light in detail and heavy with loopholes"

and likely to “box out” competition, while the FCC proposal is described as a solution that gives consumers “real choice.”

The CCIA’s plan would still require programming streams to be provided outside an MVPD-controlled app, which is a nonstarter for cable operators.

<http://www.multichannel.com/wheeler-could-be-dealer-set-tops/407319>

Multichannel News

# The Next Big Thing in Video Streaming Is: NOT STREAMING

Downloading poised to become a staple of nearly all video services 8/22/2016 9:15 AM

Author: Dan Taitz, Penthera Partners

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There's a growing trend afoot in video streaming. It's called – wait for it – not streaming. That's right – it's about downloading the content to the mobile device, to be able to watch the video anywhere, anytime, regardless of the availability of a robust WiFi connection. This is because today, and the foreseeable future, ubiquitous broadband connectivity simply doesn't exist.

With download-to-go, streaming video services can finally offer “bingeable” content to customers wherever and whenever, even when on the road and off the grid. Best of all, that horrible buffering we have all experienced won't ruin the movie stream because the viewer won't be trying to tap into the limited bandwidth of the local WiFi.

Downloading and offline viewing capability of streaming video will soon be a staple of nearly all services. A rapidly growing list of content creators and distributors have launched or are launching streaming video apps that include download functionality to meet this demand.

For example, Amazon has been providing download for some of its programming since September 2015. With the April 2016 **launch of its new app**, Starz became the first premium pay-TV streaming service to offer download-to-go. Starz joined a growing group of cable operators, TV networks and other OTT providers who give their customers the ability to download



content from their streaming video service for offline viewing. Netflix CEO Reed Hastings recently shared that Netflix is “considering” adding a download option to its service (that’s Netflix-speak for “we will be launching it soon”).

Downloading is not a new technology. In fact, purchasing music or movies for download was the way many of us were introduced to digital media. Downloading video is already wildly popular: video content has surpassed music as the most downloaded entertainment category.

More than 40% of consumers download movies/TV shows on a daily or weekly basis (Limelight Networks, *The State of Digital Downloads, April 2016*). Downloading will become even more popular among consumers as more streaming video services offer it and consumers learn how it enables them to enjoy truly mobile video content.

Download-to-go is undeniably good for consumers, but the biggest benefits flow to the streaming video services that offer it. Download-to-go improves the overall experience of consumers. But, more important for those concerned with things like ROI, download-to-go extends and expands the ability of a business or brand to engage with its customers. By making video entertainment truly mobile, without regard to location or Internet connectivity, download-to-go makes it possible for consumers to engage with a streaming video app anywhere, regardless of the availability of an Internet connection. The combination of consumer demand and business benefits makes it inevitable that download-to-go will soon be a feature of every successful streaming service.

With an ever-growing number of streaming video services seeking to add download-to-go, many product and platform executives will be turning to their technology teams or vendors to address this need. While it is easy to see that adding download-to-go is a good idea, it isn’t that easy to integrate a user-friendly download-to-go experience into an existing streaming video tech stack. (In other words, “don’t try this at home.”) Carelessly adding a downloading/offline viewing function to a streaming service will backfire if it fails to create a simple, seamless and secure consumer experience. There are many considerations when implementing download-to-go, including:

**1. Speed:** High speed downloading is critical: Consumers don't have infinite patience and are often in a hurry when they want to download a program.

**2. Configurability:** The downloading function should be configurable to enforce content windowing and other business rules, as well as consumer preferences, such as whether to permit download over cellular or when the battery is in low-power mode.

**3. Background Downloads:** Downloading should continue when a user puts the streaming app in the background to send emails or texts. Without this feature, disappointment is inevitable.

**4. Security:** The downloading solution must maintain the streaming service's digital rights management or other security.

**5. Notifications:** Completion of a download should trigger a notification that the video is ready to view.

Offering consumers download-to-go will attract new customers and build loyalty among existing ones, reducing marketing acquisition expense and churn. This will only occur if the download-to-go product enhances the customer experience.

Nothing turns off users faster than experiencing delays or interruptions when they are trying to view or download content. Before investing in its own or a vendor's downloading/offline viewing solution, a streaming service should make sure that solution is secure and reliable, and that it has the features that will make it a customer favorite, not the source of frustration and customer service calls.

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