

TECHONOMY 2017

The Topsy-Turvy World of Media

Speakers:

Jeremy Legg, Chief Technology Officer, Turner

Steve Shannon, GM and SVP – Content & Services, Roku

Moderator:

Josh Kampel, President, Techonomy

(Transcription by [RA Fisher Ink](#))

Kampel: Last night we talked about the music industry—now we'll go into a broader [discussion] on broadcast and media. I'd like to introduce and bring on stage Jeremy Legg, who is the CTO of Turner, and Steve Shannon, a General Manager of Roku. Thanks, Jeremy.

Legg: Thanks for having me!

Shannon: Thank you. Wow, they turned the lights up extra bright.

Kampel: It's getting a little chilly in the rooms—so we'll warm it up here. So congratulations on the IPO!

Shannon: Thank you. Yes.

Kampel: I said we wouldn't talk about it, but congratulations. For those here—who aren't really familiar with Roku beyond the little purple box or the little purple stick—it's great color branding that you guys have—tell us a little bit about what is the business of Roku.

Shannon: We're the leaders in North America for streaming set top boxes and also have been leaders in the TV category as well—I think about one of five smart TVs shipped in the U.S. are based on our operating systems. So we have over 15 million active households—and of course, most households have three or four people in them—so tens of millions of users and over five thousand different apps on the platform ranging from Netflix to your local pastor and everything in between. And as it's been going on—that product's been shipping for around eight years now and we compete with Amazon and Google and Apple and Samsung and the rest.

Kampel: But when you say you compete, you also have to be friends, right? Because their apps are running on your platforms.

Shannon: Yes. That's right. That's right. We have Amazon Instant Video and Amazon Prime for example, and we compete with them. We have YouTube and we have Google Play—in fact, we're the only non-Google player, I think, that has Google Play on it. We're famous for being neutral in the ecosystem. Our partners like us for that. Also, our partners like us for that because when you go to search for something, the search results are unbiased. They are in order of how we think you would want to receive them, generally in order of price. If you have access to that show for free, that's going to be at the top and more expensive as you go down the list. So that neutrality has been perhaps the most important differentiator that we've had in the market.

Kampel: And Jeremy, obviously you have to work with companies like Roku to distribute your content. You have your own platforms. For years now, Techonomy's been talking about this idea that every company is tech company. And in media, obviously, you run a group that is developing products and platforms for the future of television. Talk about why you guys had to go ahead and build it. Steve mentioned that there's TVs licensing his platform. In your case, you're building platforms for the future of television. Now, why is that that case?

Legg: I guess if I take a technology lens to look at this, historically we distribute everything through a set top box. And so the necessity to build platforms on front-end consumer devices—I don't want to call it relatively minor—but it was certainly less important than it would otherwise be.

And as eyeballs have shifted from set top boxes onto those consumer devices, at the end of the day our business is relatively simple. It's about eyeballs. So we've got to be on as many platforms and as many devices as possible, but they're all different. So the way you build an app on Roku is different than the way you build it on iOS which is different than Android which is different than Xbox. So you end up having to make investments in technology that you never had to make before in order to reach the scale of audiences that you need.

And you further kind of complicate that with the fact that the business model, platform by platform are different as well. And so your back office systems as well as your front-end app dev, web dev, and all the kinds of things that you do to deliver consumer experience. All of that kind of converges and you end up in a situation that is actually vastly more complicated than traditional delivery of video.

Kampel: So you mentioned eyeballs. Eyeballs equate to advertising dollars. So there's a constituency there around brand advertisers. There's the consumer experience. There's the platform and then obviously, there's the content creator. In this world where we talk about unbundling and cutting the cord and all that—you know, who's winning, right? Of the distribution platforms, the content creators, the brand advertisers, the consumers—who wins in this world where we decouple and deliver to all these different devices?

Legg: I'd say Google and Apple seem to be doing well, in terms of at least financial metrics. But I think what's really happening is that you still have a pretty vibrant TV ecosystem. While it's declining—the number of eyeballs in it certainly hit their apex and are on the downside—there's still an enormous amount of viewing that actually happens there, whether it's on a TV set through a set top box or it's a connected device connected to a TV. I haven't seen the latest Netflix numbers in the last year or so, but most of their video streams are actually going through TV sets—gaming consoles, Roku boxes, and the like. So the way the consumers consuming the content, at least for long form professional video, actually isn't all that much different than it was before. But the types of technology that consumers access to get to the content have completely changed. And so their expectations are now really much more digital and software-based than what the traditional television industry did a very poor job of—they didn't innovate the set top box. And because they didn't innovate the set top box, the consumer moved the other way.

Kampel: And you know—we talk a little about this idea that no one wants to watch ads, right? But no one wants to pay for the content—

Legg: They should though—it's important that they watch it.

Kampel: Roku has looked at new business models by which you could subsidize content with targeted personalized advertising. Talk a little about what you're doing to address this. People don't want to subscribe to Amazon, Netflix, and HBO Now, and they're paying for all of these unbundled channels. How do you get around and how do you integrate the advertiser to help subsidize some of that content?

Shannon: Yes. That's a good question. And it combines with your earlier question about who's going to win in the ecosystem. So the first question—the customers clearly win. I think music is an interesting analogy—more extreme, but where the music experience has always gotten better with a lot of disruption on the business side. I think actually less disruption on the video side, but generally what happens is distribution becomes a weaker part of the overall system and the ends—meaning the consumers over here and the producers, the copyright holders over here—end up being better off because of more competition and distribution.

So we have this intense competition in the distribution set where we compete with Apple and Amazon and Google, like I said. So how do we differentiate ourselves—what do we do for the content providers to help them as a distributor—which is what we are. And ad tech has certainly been a really promising area that we've been investing heavily into. We believe that people like free stuff. And the beauty of it is that we can make the experience better by reducing the ad load pretty dramatically while keeping the ad dollars at the same level because we're just getting rid of waste. We're not sending dog food commercials to people who don't have pets. Things like that.

Kampel: So they're willing to pay a higher rate for contextually relevant and targeted—more personalized [ads].

Shannon: Absolutely. We can measure it better. We can target it better. It can be more interactive—all kinds of analytics and whatnot. So that delivers a lot of value to the advertising ecosystem which goes back and funds the content which is then delivered free to the user. So that is a very virtuous cycle that Turner have been leaders in. We believe that free TV will live strong. That's not to say SVOD is going away anytime soon—we certainly root for SVOD, it's a very important part of our platform—but the ad-supported experience is going to keep getting better from a consumer standpoint and from an advertiser standpoint.

Kampel: And is everyone buying into that idea, right? So are the advertisers there? I mean, they've seen this happen in traditional digital, right? So they're used to buying it that way, in digital.

Legg: That's right.

Kampel: So are they starting to see that move towards VOD and sort of all these other digital channels and willing to pay more knowing that it's more targeted?

Shannon: Yes. CPMs are going up, for sure, and that's because we can demonstrate the ROIs being better than the traditional TV buys. So you're right—there's a ton of momentum and the traditional \$70 billion dollar U.S. television ad market doing things the way that they've always done—and scale is very important to advertisers. You've got to be able to move the needle. And traditionally, OTT, streaming television, has been more early adopter-ish or just relatively small compared to TV—so the scale hasn't been there.

But that's changing now—now streaming is mainstream. Tons of millions of people—tens of millions of people are doing it—and so they really can move the needle and in a more effective way than they have been able to historically. So yes, it's a very popular product with advertisers and the whole industry is coming around to it finally.

Kampel: And Jeremy, Turner obviously has a variety of channels, but Cartoon Network, Turner, all that—how do you use the data across all of those channels and behaviors to help deliver a better experience? And in the end, when you think about cable bundles that bundle in all these channels, you guys won in the past—because someone would buy this bundle of all of your channels—as we start to measure the consumption of each of them individually, people will get smarter and say, “Well, I don't need Cartoon Network because I don't have any kids.” But how are you leveraging that data and sort of adapting in real time?

Legg: Yes. There's a lot in that question. I'll address it on two levels. From a data perspective, we look at it both in terms of content consumption and we look at it in terms of advertising. So on the advertising front, what you essentially have are two different mechanisms in order to monetize your content. One is essential, digital programmatic, first-party ad sales, where you're selling either brand sponsorships or you're selling against particular audience segments and you can do that with a sales force or you can liquidate that inventory programmatically.

On linear [media], what's really happening is that because you don't have targetability and addressability for the most part except in certain local avail context, what you're really doing is saying out of these 100 people that are watching, there's 20 of them that want to buy a car. And so you're going to charge a rate associated with advertising, which is really based on yield, right? Here's the CPM that offsets the other 80 percent of the folks. That's going to start changing.

So I think one of the stories that doesn't get talked about enough is what's actually happening over the managed network in the last mile. That's all going IP. So you're going to start to see addressability over the managed network through cable operators in the very, very near future. 2018, I think will actually be where you start to see a lot of that. Comcast and others are actually quite far down the road. So in a traditional stream of CNN, for example, you can have a different ad to a different household through different cable providers beginning next year. That's going to completely change the concept of how inventory is managed on linear, how pricing works, how content is liquidated and there's lots of companies that are out there are kind vying for that.

On the bundling side, right—I'd like to say all of our children are as pretty as each other, but some are slightly prettier than others—and so there's going to be a washout in networks. Turner has ten networks, but four of them account for probably 80-85 percent of our revenue. And we basically think that whatever media apocalypse might be on the horizon that those networks are going to be included in those bundles. And for the most part, that's been true as you look at OTT and other kinds of delivery of traditional television networks. So we're less concerned with the long-term prospects of our core networks.

What we're more concerned with is how do you then adjust for the way that things are monetized on digital and OTT consumption, because the economics are incredibly different. And so consumers want things free, but *Game of Thrones* isn't free. And the amount of money you have to spend per episode for these types of content is incredibly expensive.

And so the industry is really going to go through a choice of saying, you're going to have lower cost, more repeatable, less serialized types of content because it's cheaper to make, or you're going to make big bets in investments in big production types of content. And when you get a hit, it's great, but your batting average has to be a lot higher than it has traditionally been, but that is much harder because the fragmentation of the audience is just so much greater.

Kampel: I heard from someone yesterday in the music industry that producers are starting to put out 20-second clips to test, right—because they're able to measure and see what resonates with consumers. Do you see the content creation side will start to leverage the data and platforms and not commit to six, eight, ten episodes but will start doing shorter pilots and leverage that data and be able to iterate more quickly, or?

Legg: I think there will be certainly more A/B testing and those type of things that folks do. But whenever you go to a true content creator and tell them to use data to come up with their

ideas, you don't generally get a good reception. So I think data can be an ingredient and it can inform, but I don't think a creative person is going to go and talk to the data scientist and tell them what show they need to make.

Kampel: And on the data front, Steve, you guys have a very unique perspective of how people are consuming content, right? Especially on the panel itself, you're seeing the apps that you're running, how are you guys using that data? How are you informing both your app providers as well as creators on what people watching?

Shannon: Yes. We have less access to that than you might think. Most of our apps we can know, but don't necessarily bother to know. And certainly a lot of the bigger apps we aren't allowed to know what folks are watching. But the apps in our platform are hosted. So Turner apps, for example, are actually hosted by Turner.

So they know, obviously what they are delivering and all of that and it creates this situation where you have these apps that all on their own know what the viewing is going to be, but the umbrella layer of UI to be able to just put right on the homepage and say, "This is the last episode that you watched, so here is the next one for you." Those types of features are really dependent on collaboration between the platforms and the publishers and that's something that we're working hard on right now. But we're not masters of the universe of viewership information.

Kampel: So you're not replacing Nielsen anytime soon.

Shannon: In terms of measuring advertising, we support Nielsen and all of that. So we're pretty well plugged into the traditional way of doing things. We're not out selling consumer data or making that stuff available to anybody really, in any way.

Of course we use it to try and make our own platform better and make the ads that we deliver more relevant. We're very careful about the data and we don't necessarily always have access to as much viewership info as you might think.

Kampel: And, Jeremy, other than the traditional businesses of Turner, you also have subscription businesses. So like FilmStruck—you guys launched last year?

Legg: Yes.

Kampel: Talk about how really all of this catalog content—there's people sitting on catalog and looking for ways to leverage it and monetize it—what do you think about all this back catalog content and how these platforms will allow you to resurface the gems that people may have forgotten?

Legg: Yes. I think there's a couple aspects to it, right? If you look in the traditional ecosystem across all distributors, the ability to actually deliver the types of consumer experiences that consumers are demanding now is candidly limited.

And so what we've looked at is saying, "What networks is it that we have where you can actually expand the corpus of content that exists there and essentially give the consumer an additional ability to consume it?" So you can look at Turner Classic Movies, for example—which is a very kind of cultish service—but the ability to actually deliver movies against that and catalogs of movies is relatively limited, particularly when you take into account consumer experiences.

So we went ahead and built out a direct-to-consumer platform in FilmStruck, which has some of those films in it but also, we bought the Criterion Collection and some other components to really expand the amount of content that folks have. And then you also just kind of canvass the marketplace—there really isn't a great movie service out there anymore, right? I mean HBO has an advanced window but a relatively finite number of movies. And Netflix really candidly hasn't been pushing in that direction as of late. They've been pushing into original and TV content. So we looked at that as a white space for us to be able to satisfy the consumer and so far, it's been quite successful in terms of the number of subscribers that we have.

Kampel: So are you still surprised when you drive around and see a Redbox and actually see physical media? Obviously, there's different historical legacy licensing challenges and why things are still distributed via physical mediums, but will those be going away?

Legg: I think there's a bubble in New York and a bubble in LA and the reality in between.

It wasn't that long ago, lest we forget, maybe it was eight, nine years ago that roughly 10 million households migrated off of rabbit ears. So we're all lost in the sauce of all this stuff. But there's a latency component to the marketplace and DVDs and Redbox are the latest incarnation of it. And they won't go away as fast as you think they will.

Shannon: But the library licensing, what you're implying, I think, is that the licensing activity that is going on behind the scenes is changing a lot, right? Television syndication used to be way more powerful than it is now. Netflix and Hulu and Amazon for that matter, are moving into more originals and doing less licensing. And so there's a little more content on the shelves, a little more library content on the shelves, and it kind of ebbs and flows as the technology changes and evolves. It affects the licensing structure, so it's very dynamic and the media companies are having to adjust their business models. And it's not always easy for them to know how to optimize the values of their library. I think you're going to start seeing a lot more innovative services like that one popping up where there are new ways to make this library content available.

And back to the advertising thing. A lot more of it will become available on an ad-supported basis. It used to be the YouTube CPMs were so low, it just wasn't worth making quality content available there, right? Long form movies, you don't just see people uploading movies to YouTube, high quality movies. Well, in the OTT domain, the advertising model is so much richer because the ads aren't skippable, they aren't below the fold; there's no fraud, they're not like behind another window, you don't have all these problems. So the licensors are starting to

realize that actually you can do an AVA, an ad-supported service, and get a lot of money out of it now.

So that's a whole new model coming into play, I think, in the way library is going to be monetized in the absence of the rich syndication deals that used to exist and the subscription VOD services that used to want to license those shows.

Kampel: Do we have any questions out here? I'm going to encourage you guys, we have about eight minutes left so if you have any questions, feel free to raise your hand.

The theme this year was the convergence of man and machine. So we talk a lot about consumers and technology but really the human side—again, here we're talking about media consumption—something that everyone here does for hours upon hours a day.

How do you think companies need to be using—if it's AI or machine learning or all of these—to sort of continue to understand human behavior and deliver a better experience. Not necessarily just for the advertisers, but really just overall adapt to what people need and how to continue to evolve?

Legg: Yes. I'll say on that one we aren't yet at a place where we're kind of using AI to determine sentiment and things like that and build content around it or things like that. But we are beginning to use it to actually look at the video that we have and develop metadata associated with it on an automated basis so we can begin to understand the consumption habits that consumers have when they're watching our shows or they're consuming our content. This gets into the facial recognition components, object recognition, those types of things. But then actually getting into richer sets of metadata to really understand what's going on in a scene—is it funny, is it sad, is it angry?

And then the degree to which you can then begin to understand when consumers are tuning in, when consumers are tuning out, what types of things people are in the mood for, then I think you can get into better forms of recommendation. But I think that's still a little ways out as it relates to video content.

Shannon: Yes. One of the big points is personalization. So today, if everyone in the neighborhood is getting the same linear lineup and maybe the same ads, tomorrow everyone is going to be watching something different. And even in a household where it used to be four or five people watching the same show—now it's five people in five different rooms watching five different shows. So that kind of personalization is a nice consumer promise.

It's just an interesting kind of dynamic with the industries, because I deal with the most technically advanced companies and I deal with old-school media companies, everybody is very precious about data, which makes sense, because you hear about Facebook and Google and everybody making all this money off of data, so people are very precious about the data. But very few companies are actually in a position to actually have the software. In some media companies, data-driven means putting some pie charts on a PowerPoint and, "Look, I'm data-

driven!” Data-driven means software, it means machine learning, it means algorithms, it means having an application for all of that stuff that is monetizable.

And so, I think it’s a challenge for CTOs to know “Do I hoard my data and have a model to monetize it or do I partner with those who can and am I giving up the ghost when I do that?” And that is really is a tough. So right now we’re very much in a kind of a data hoarding mode because everyone is just sort of afraid of the uncertainty of the future. And that holds back a lot of value proposition, a lot of monetization. But you kind of understand it because giving up your data could be giving up the golden goose. It just depends on who you are, what your competencies are, and what your potential for modernization is.

Legg: If you use any third-party tech you almost always are giving up your data anyway.

Kampel: Yes. We have a question back there.

Audience Member: The question is, when things are so uncertain and there’s so much changing, sometimes it helps to think about the strategic constants that don’t change. And I’m curious from your perspective, are there any immutable truths of media, any immutable truths of content, that people can count on to at least start to chart their way to the future?

Shannon: People love entertainment, you know? I think TV, generally—a lot of people like to say, “hey, it’s all moving mobile” or “it’s moving to smaller screens” or things like that. What Jeremy was pointing out, while there’s a lot of transition going on, TV numbers are still very strong and it’s like eight times the amount of time spent on your phone, for the average user, or something in that ballpark. So the TV is enormously powerful, remains enormously powerful, is not really declining at any clip. I mean, it’s shifting from traditional distribution to OTT and all that’s going on, I think the TV remains an extremely—it’s the most important medium of our time. I think it will be for the foreseeable future.

Legg: The things that I watch are really more of a technology and platforms level. And if you think of the dreaded set top box, well, what Comcast has done—and I give props to Comcast on this—is they’ve actually turned it into a platform, right? So they’re building out an app platform associated with it. They’re embedding software in it. They’re effectively trying to become the aggregator of aggregators and then expand the associated footprint of that. It’s a pretty decent consumer experience. Other operators haven’t kept up with it but they’ve done a pretty nice job.

As you then look at other platforms that are non-set top box based, you get into the question of who is controlling those platforms, because who controls those platforms really controls what the consumer experience is going to look like and how the money is made. If you just go down a tech stack, just a basic tech stack—the browser layer, the app layer, an ad server layer, an operating system layer—there’s very few companies that are left, right? I mean, Chrome is dominating the browsing market now. There’s basically two app stores plus Roku that’s out there, but really, iOS and Android are dominating that space. If you look at the operating

system wars, it's pretty much over. If you look at the ad-server wars, right, I mean Facebook and Hulu built their own ad servers. There's basically two. It's FreeWheel and DFP.

So as you go down, those are the folks that are writing the rules associated with content modernization. It's the folks that are writing the rules with consumer experiences because they control those platforms. There's very little white space left but the places where I think there is white space are smart TVs. Roku has done a nice job there but there still isn't a dominant player across the smart TV platform. You don't have app stores that kind of dominate across that space. Chip sets inside of TVs is another area that folks can take a look at because that isn't dominated by Qualcomm and Intel and AMD and the traditional chip manufacturers.

And so there's some white space associated with that that the big digital folks haven't taken over. If they do take that over, you already know what model is going to be enforced, right? They're going to enforce the app store there; they're going to enforce the browser there, because they've built a very good mouse trap. So the part that I think is a content publisher that we look at—and we call this, in Turner world, the race to the middle—is you're seeing obviously, tech companies that are throwing around pretty significant amounts of money to go out and experiment with building original content. I mean, look at what Amazon has done, look at what Apple has done, and they're putting some pretty significant dollars against that.

Content companies have to start thinking like platform companies and that's hard for a content company to be able to do because it's not really in our core DNA. But that's why Turner has done things like go out and buy technology companies and I think you're starting to see that more and more, what Disney just did with BAMTech, for example.

And so as more and more of that begins to happen and you get to that race to the middle, it'd be interesting to see how those kind of remaining white spaces play out and whether the big digital players own them too or other models can begin to evolve, and I vote for other models.

Kampel: Great. Well, thank you both for joining me today, Steve and Jeremy, and it's great to have you.