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on

THE FUTURE OF VIDEO

before the

Subcommittee on Communications and Technology
Committee on Energy and Commerce

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Good morning Mr. Chairman and Members of the Subcommittee. My name is Michael Powell and I am the President and Chief Executive Officer of the National Cable & Telecommunications Association. Thank you for inviting me today to testify on the future of video. We welcome this important hearing.

Cable Always Has Been an Innovative Force in Video

From its beginning, cable has driven innovation and transformation in the video business. Cable was founded to make broadcasting better – bringing it to suburban and rural areas outside the reach of over-the-air reception. We made programming better – breaking the lock of the three channel universe by investing billions in original content that appeals to specialized audiences as well as the mass market, and building award-winning iconic brands like CNN, ESPN, HBO, CNBC, C-SPAN, History and Discovery. We were first to unshackle consumers from "appointment TV" with video on demand and the wide deployment of DVRs.

When we turned to areas other than video, the results were similar. In 1996 Congress wanted telephone competition and cable delivered it. Today, 1 in 3 households that have wireline phone service receive it from a cable operator.

And then there is broadband. Where high-speed data service was once the purview only of businesses, cable operators brought broadband Internet service to residential subscribers. This was not serendipity. The industry borrowed heavily and took enormous risk by ripping out its one-way analog network and replacing it with a higher capacity, two-way digital platform that made broadband possible. Cable broadband now reaches over 93 percent of homes—rich, poor, urban and rural. We have increased broadband speeds over 900 percent in a decade, (with even faster speeds coming this year) and we have extended the reach of our broadband service through extensive Wi-Fi networks. All of that in turn has enabled consumers to receive high-quality video over the Internet and on mobile devices.

The Golden Age of Video is Today

Television of the past was the rusty Iron Age compared to today. By any measure, the video experience has never been better than now. There is (1) more content, (2) higher quality programs, (3) more variety and diversity, (4) more sources for content – and video is available on a wider range of devices. There are hundreds of video programming networks, presented in brilliant HD quality and some in 3D. This is an enormous expansion from just twenty years ago. Artists and creators are producing some of the most compelling programs ever and cable is their preferred palette. In the most recent award seasons, cable programming won 73 percent of TV Golden Globes and 50 percent of Primetime Emmys. Acclaimed series such as "Game of Thrones," "Mad Men," and "Homeland" are some of the most accomplished dramas ever.

Public policy has always been concerned about diversity of viewpoints and niche programs for smaller yet passionate audiences. The cable model brought that ambition to fruition. The cable dial runs the gambit – from compelling scripted dramas, educational content, kids programming, sports, cooking shows, and news and public affairs. Simply put, if you fish, cook, workout, love music, crave sports, gorge on politics, admire dance, have a fetish for Jersey youth, or want programming in your native language or reflective of your community you will find it on cable. With all respect to former FCC Chairman Newt Minow, television today is no vast wasteland.

If you are itching to watch video, the number of sources you can turn to have grown exponentially as different providers compete for your business. You may subscribe to cable television and get up to 150 HD channels, the latest premium content and live events, video on demand and the ability to record and watch at your convenience on a DVR. You can get a very similar experience from Direct TV and Dish. Or, in many markets, you can also choose service from a telephone company. AT&T U-verse and Verizon FiOS have been popular new sources of video. Besides these subscription TV services, you can buy DVDs at Best Buy or better yet walk to the corner store and rent them for $1.20 from one of 30,000 plus Redbox kiosks.

If that were not exciting enough, Internet-delivered video has ushered in an even greater explosion of choice. Use of the Internet to watch video has increased 79.5 percent between the 3rd quarter of 2008 and the 3rd quarter of 2011.[1/] By one estimate, real-time video streaming represents 62.5 percent of downstream Internet traffic in North America during prime time evening hours.[2/] By the end of 2011, more than 100 million Americans watched online video content on an average day. That's a 43 percent increase from just a year ago.[3/] Revenue from video content delivered over the Internet to televisions "is expected to grow from $2 billion in 2009 to over $17 billion in 2014."[4/] The largest subscription video provider in the country today is Netflix – not Comcast, Time Warner Cable, DirecTV or any other multichannel video programming distributor (MVPD).

Companies that stream content are proliferating: Netflix, Vudu, Hulu, Amazon, iTunes, CinemaNow, Network websites, HBOGo, and user-generated or special interest sites like YouTube, Vimeo, and TED.com are a few. Many more offerings are anticipated from the likes of Google, Apple, Intel and Sony.

1/ *The Cross-Platform Report – Quarter 3, 2011 US*, Nielsen.

2/ *Global Internet Phenomena Spotlight 1H 2012 North America, Fixed Access,* Sandvine Incorporated, May 16, 2012.

3/ *US Digital Future in Focus*, COMSCORE, Feb. 2012.

4/ U.S. Dep't of Justice, Competitive Impact Statement, *United States v. Comcast Corp.*, No. 1:11-cv-00106 (D.D.C. Jan. 18, 2011), *available at* http://www.justice.gov/atr/cases/f266100/266158.htm.

And web video is not limited to a PC screen any more. Computers can connect to big screen televisions; content can be beamed to sets using functions like Apple Airplay; box companies like Roku, Tivo and Boxee can deliver web video to the TV set; and manufacturers like Samsung are making the Flat Panel TV web enabled, with apps incorporated for accessing video content. One study estimates that at least 38 percent of U.S. households have a television set connected to the Internet, through either an Internet-ready TV, game console, standalone Blu-ray player or smart set-top box connected to their home network."[5/] Smartphones and iPads have proliferated as compelling devices for consuming video content and enjoying second screen experiences.

Cable, too, is working to bring better video experiences to consumers wherever and whenever they want, offering, for example, applications that allow subscribers to view VOD and subscription linear channels on their iPads. Cable's "TV Everywhere" initiative makes it possible for our customers to watch video content they have already paid for on their laptops, tablets, smartphones and other portable devices – no matter where they are.

Even while offering this extraordinary array of new services, features and capabilities, cable has remained a solid value for American consumers. The fact that so many Americans stuck with cable during the recession is a testament to the value Americans get for their entertainment dollar. The price per viewing hour of entertainment for cable television is lower than for Netflix, a trip to the movie theatre, a sporting event, or even a DVD rental. Generally, the price for broadband service from most cable providers remained unchanged for 10-12 years

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5/ *38 percent OF U.S. HOUSEHOLDS NOW HAVE A TV CONNECTED TO THE INTERNET*, Leichtman Research Group, Inc. (April 9, 2012), available at http://www.leichtmanresearch.com/press/040912release.html.

following the introduction of services, even as broadband speeds increased nearly ten-fold over the same period of time.

Creators have never had so many ways to reach viewers. Broadband networks and the proliferation of devices capable of displaying video have dismantled the old barriers that separated content creators from their potential audience. A growing array of video content is being conceived and developed primarily for Web distribution. For example, Netflix has begun developing its own exclusive television series offerings to compete with video networks and services. Google is hosting original programs of all niches by independent producers. Of particular note, this popular new platform for accessing video content has emerged and thrived without any government-guaranteed access to programming or restrictions on licensing imposed upon content providers.

While not a complete substitute for a cable subscription, online video offerings are good enough for some consumers – currently a small minority – to cut or shave the cord. According to one report, in the three years between 2008 and 2011, "more than 2.65 million subscribers . . . dropped their pay-TV service entirely in favor of streaming video options."[6/] Yet during that same three-year period of time, 2.1 million net, new multichannel video customers were added in the U.S. While cord-cutting and cord-shaving are a business reality facing cable operators, it is also the case that there are millions of new customers subscribing to our service for the first time – or returning to us – because of the HD, on-demand, multi-screen and other advanced video offerings we make available.

6/ Mike Snider and Roger Yu, *Flood of Video Streaming Options Could Confound TV Watchers*, USA Today (April 10, 2012), *available at* http://www.usatoday.com/tech/news/story/2012-04-09/streaming-video-options/54136024/1. *See also*, Daniel Frankel, *Nielsen: 1.5M U.S. households cut the cord in 2011*, PAID CONTENT, May 4, 2012, *at* http://paidcontent.org/2012/05/04/nielsen-1-5-m-u-s-households-cut-the-cord-in-2011/.

As always, the cable industry is responding to changes in technology and in the marketplace in order to stay ahead of the curve and provide leading-edge services to its subscribers. The opportunities presented by broadband are great, as are the challenges. There are capacity constraints arising from the growing demands on the network imposed by services and offerings that require more throughput. High-quality video depends upon continuous bit streams, but the Internet is largely a packet-switched network that sends traffic in bursts. Any network that is shared by many users—as all residential broadband networks are—must cope with congestion and ensure all users get quality service. And as we continue to invest billions annually in fixed cost networks, we must continue to explore fairer and more efficient ways to price service, including potential models that require heavier users to pay more for the additional network resources they use, rather than have lighter users subsidize the power users.

The Internet is vastly more flexible than traditional voice or video networks because it transmits information in packets and reassembles them at the subscriber device – but the "network of networks" that comprise the Internet does not yet offer the throughput and reliability to deliver video programming with the consistency of plant that is specifically built to deliver cable and satellite television services. By some estimates if you tried to put all cable content on the Internet, the Internet would be 100 times too small to handle it. While that circumstance will change, it will require investment and innovation to make that happen.

Cable's business incentives in today's marketplace are, contrary to suggestions from some quarters, fully aligned with the interests of consumers. The path to continued growth for cable is to enhance and expand its customers' use and enjoyment of the broadband platform we offer.

If consumers want to access video content via their laptop, their Xbox, their iPad, or their mobile device, it's our job to make that possible for them. If they want to obtain video content from Netflix, Amazon, Hulu, YouTube, Apple or any other online provider, it's our business to make that possible as well and we are. As our new tag line says, "Cable: It's more than TV. It's how we connect." Cable has a profitable broadband business and benefits from greater Internet consumption generated by streaming video services. To make the point, cable companies frequently promote web services like Netflix, Skype and Facebook in their ads.[7/] So while it is natural that cable operators are themselves developing new services and features that enable their subscribers to access video online and on-the-go, such offerings do not in any way displace or hinder any other provider of content, service or devices in the online video market.

Claims and concerns that cable operators will use their control over broadband networks to stifle online video are simply not borne out by the facts. The exploding growth of online video usage undercuts any argument that cable is standing in the way of this business. To the contrary, cable's broadband networks are the engines that have enabled online video service to emerge and flourish. Indeed, there is simply no way to reconcile such claims with the wealth of content, services and devices that are available for accessing and enjoying online video.

The Future

As vibrant as today's video marketplace is, the landscape of tomorrow that is taking shape is even more exciting. Content will be produced and distributed not just for television, but for any device with a screen capable of displaying video. Consumers will enjoy more variety and choice in how to access and interface with the video and on-demand offerings available to

7/ *See* http://www.youtube.com/watch?v=zEhULSD3MAI.

them from both their television and the Web, using, for example, their iPad or other portable device for navigation, instead of a remote control.

We can envision a world free of set-top boxes. The marketplace of the future is apt to move from being hardware-centric to software-centric, which will accelerate the pace of innovation and adaptation to new features and capabilities. Today, set-top box-based services cannot be deployed until the boxes are tested and glitch-free; by contrast, software-based services can be released in Beta and then improved. Beta versions of new products are common among the Googles and Apples of the world – and consumers benefit from the more rapid innovation under this model.

A vast array of cloud-based services and applications will make available a new generation of interactive and multimedia offerings, and dissolve the lines between video, data, graphics, voice, and text. Comcast is offering consumers a more personalized and interactive viewing experience with the launch of its X1 cloud-based DVR user interface. With the X1, all the processing is done in the network, which gives Comcast the flexibility to quickly test and create new apps for customers without worrying about whether the customer's set-top box is outdated or not. It will also provide more personalized features, for example, allowing customers to see which shows their Facebook friends are watching. The X1 can also be used with mobile phone apps that turn handsets into remote controls.

Cable's investment in interoperable Wi-Fi networks will provide consumers with unprecedented levels of portability and flexibility for consuming video and other broadband service offerings. Cable Wi-Fi also enhances the efficiency of mobile broadband networks by enabling providers to offload traffic where Wi-Fi is available. Smartphones can use Wi-Fi to surf the web and even make calls, providing consumers with the opportunity to save money on their wireless service bills.

Importantly, all of the innovation that is taking place to bring both today's – and tomorrow's – advanced services is occurring *without* technology mandates not because of them – and sometimes even in the face of existing regulatory impediments.

Strengthening Incentives to Invest and Innovate by Updating the Regulatory Framework

The future looks bright, but it will require a business and regulatory framework that preserves and strengthens incentives to invest and innovate. The last 20 years have shown that cable operators and programmers are willing to invest aggressively to bring new services, features and capabilities to consumers. But legacy rules rooted in outdated assumptions concerning the state of competition in this marketplace will only frustrate our ability to obtain the capital for those investments. Investments are deterred by policies that seek to turn our networks into commodities. I doubt anyone here would want to revive the almost non-existent pace of innovation that residential telephone consumers experienced in the 50 years between 1940 and 1990, but that is the risk attendant to proposals that would turn network capacity into a commodity. The way forward to the future is not to revive regulatory anachronisms, but to cast off that baggage.

That means doing away with rules predicated upon marketplace conditions that no longer exist. Twenty years ago, cable was effectively the sole provider of multichannel video programming service in the country, serving 98 percent of all multichannel households. Today, incumbent cable's share of the multichannel marketplace stands at 56 percent and 4 of the 8 largest MVPDs in the country are non-cable.

Twenty years ago, there were no DBS companies providing multichannel video programming. Today, DirecTV and Dish Network are, respectively, the second and third largest MVPDs in the nation. Their multichannel video services are available to virtually every household in the country and together they serve 34 million households.

Twenty years ago, there were no telephone companies providing video service to cable subscribers. Today, AT&T and Verizon, the first and second largest communications companies in the world, make available multichannel video programming to more than 45 million households combined. Verizon and AT&T are respectively the sixth and eighth largest MVPDs in the country, and telephone companies are offering competing video service in rural as well as urban markets around the country.

Twenty years ago, the average cable system featured 36-54 channels and there were no more than 100 programming channels available for distribution to subscribers. Today, most consumers receive service from providers offering hundreds of channels, and there are now approximately 900 non-broadcast channels available for distribution to multichannel households.

Twenty years ago, vertical integration between cable systems and cable programming channels was widespread. Cable operators owned most national cable channels carried on a cable system. Today, vertical integration is the exception rather than the norm, falling from 53 percent of networks available for distribution in 1992 to only 14 percent today.

Twenty years ago, most American households relied primarily on over-the-air broadcast stations for their video entertainment. In fact, 41 percent of households exclusively relied upon broadcast television, a number that has fallen today to 14 percent. On average, broadcast stations accounted for 68 percent of television viewership in 1992. So, on a typical day, just over 2 out of 3 TV viewers were tuned into broadcast stations. Twenty years later, that number has flipped with more than 2 out of 3 television viewers tuning into non-broadcast channels during a given day.

While the premises for cable regulation have been shattered by competition and technological change, old rules based on aging snapshots of the video marketplace remain in effect. There are rate regulation rules designed to serve as a proxy for market-based pricing, even though most American households have a choice of at least three MVPDs and millions may opt to forego multichannel subscriptions altogether in favor of Internet-delivered video.

There are program access rules designed to nurture facilities-based competition to cable. But cable's main MVPD competitors – DirecTV, DISH Network, AT&T and Verizon – are all some of the largest communications services providers in the nation. These companies hardly need the government's help to remain viable competitors to cable. And, in contrast to 20 years ago, the vast majority of programming networks are not owned or controlled by cable operators, mitigating concerns that bottleneck control of programming could somehow stifle the emergence of competitors to cable.

There are also content carriage obligations, such as leased access, whose usefulness has been obviated by the Internet; and program carriage rules designed to protect programmers unaffiliated with cable, even though the vast majority of programming carried on cable systems and available to consumers already is unaffiliated with cable and it has never been easier for new video content to reach consumers. It is also time to re-examine those rules that affect the cable carriage of broadcast signals, such as must carry, retransmission consent, and non-duplication rights, that were adopted in a world in which technology and competitive market forces were vastly different than they are today.

In light of the fundamental changes that have occurred in the marketplace over the last 20 years, Congress should reassess the continued need for these restrictions. A new dialogue is essential because the continued application of outdated rules creates uncertainty and marketplace distortions, encourages unproductive attempts at regulatory arbitrage, and dampens incentives to invest.

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Thank you again for the opportunity to appear today. I look forward to your questions – and to the continued opportunity to consider these critical policy issues.

Cable

Then & Now

	1992	2012
Cable % of all MVPD homes	98%	57%
% of national cable nets that are part owned by cable op	53%	14%
Total cable channels	101	900+
Top 10 MVPDs that are NOT cable companies	None	Direct TV (#2) DISH (#3) Verizon FiOS (#6) AT&T U-Verse (#8)
Services offered	Analog Video 35-40 channels No Broadband No Voice	Digital Video 100's of channels Broadband up to 100+ Mbps Digital Voice 25 million customers
Average daily TV viewing	7hr, 5min	8hr, 30min
% of all TV Households that are Pay TV HHs	61%	86%
% of TVHHs exclusively Over-The-Air	39%	14%
% of day viewership share held by broadcast TV	68%	32%

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