

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Annual Assessment of the Status of)	MB Docket No. 14-16
Competition in the Market for the)	
Delivery of Video Programming)	

**COMMENTS OF
THE NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION**

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The National Cable & Telecommunications Association (“NCTA”) hereby submits its comments on the Notice of Inquiry in the above-captioned proceeding.¹

INTRODUCTION AND SUMMARY

More than ever, the video marketplace is undergoing exceptional transformation. The power of technology and the seemingly insatiable consumer appetite for video content are reshaping the video marketplace. Once relegated to console television sets, and then, only quite recently, to a small portion of the screen on desktop computers, video can now be streamed, saved and viewed on nearly any screen with an Internet connection. And while once the providers of video services were limited to broadcasters, and then cable operators, and then video rental stores and direct broadcast satellite (“DBS”) and telephone companies, consumers can now obtain video content from a constantly expanding cornucopia of sources.

Not only have the traditional multichannel video programming distributors enormously expanded their array of program offerings – both the number of linear programming channels and the amount of programming offered on a per-program, on-demand basis – but much of this

¹ See *In re Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Notice of Inquiry, MB Dkt. No. 14-16, FCC No. 14-8 (rel. Jan. 31, 2014) (“Notice”).

same content, along with all sorts of new and different video content, is available from many different online sources.

The time when cable faced little competition in the video marketplace has faded into distant memory. The Commission's annual reports long ago stopped characterizing cable operators as the "dominant" providers of multichannel video service. And the competition that has taken hold in the video marketplace has impelled cable operators to continue to invest and innovate in order to continue to provide the most attractive choices of services to consumers.

Year after year, the annual reports have shown cable's share of the multichannel video programming marketplace (not even including online video) diminishing, and that trend is reflected in this year's data as well. And, as in previous years, cable has continued to respond vigorously to competition in the marketplace. Today's consumers have come to expect highly personalized products and the ability to interact with content anywhere, anytime.

Since the Commission's last Video Competition Report, the industry has made impressive progress. Cable operators have introduced new applications to move content out of the TV set and onto portable devices. They have worked with programmers to offer cable service to nontraditional devices consumers already own such as game consoles, Smart TVs, smartphones, and tablets. And many cable companies have launched streaming services – both in-home cable services and out-of-the-home Internet services – that complement the cable experience.

Cable companies continue to invest huge sums in the networks that make so much of this innovation possible. They have invested over \$210 billion since 1996 and continue to invest about \$13 billion per year. As a result of this investment, Internet speeds are increasing over 50 percent a year while digital cable, once only a small portion of the market, is rapidly approaching

ubiquity. Beyond the confines of the home, cable operators are opening up the airwaves to video and Internet access by deploying hundreds of thousands of Wi-Fi hotspots in cities and towns across the nation.

With so many choices available to consumers, cable program networks are also striving mightily to produce programming that attracts viewers in a fiercely competitive marketplace, and they are succeeding by almost every measure. Critics abound with adulation for the quality of TV programming in recent years. As David Carr of the New York Times recently noted, “The vast wasteland of television has been replaced by an excess of excellence that is fundamentally altering my media diet and threatening to consume my waking life in the process.”² As a result of all this high quality programming, along with the ability of viewers to watch programming when and where they choose, consumption of television programming has increased – the mark of a vigorously competitive marketplace.³

All of this is driven not by the regulatory hand of government but by marketplace imperatives – consumer demand for new distribution platforms, more content and mobility for every service on every device, and a cable and programming industry using every aspect of technology and competitive flexibility to adapt to meet those demands.

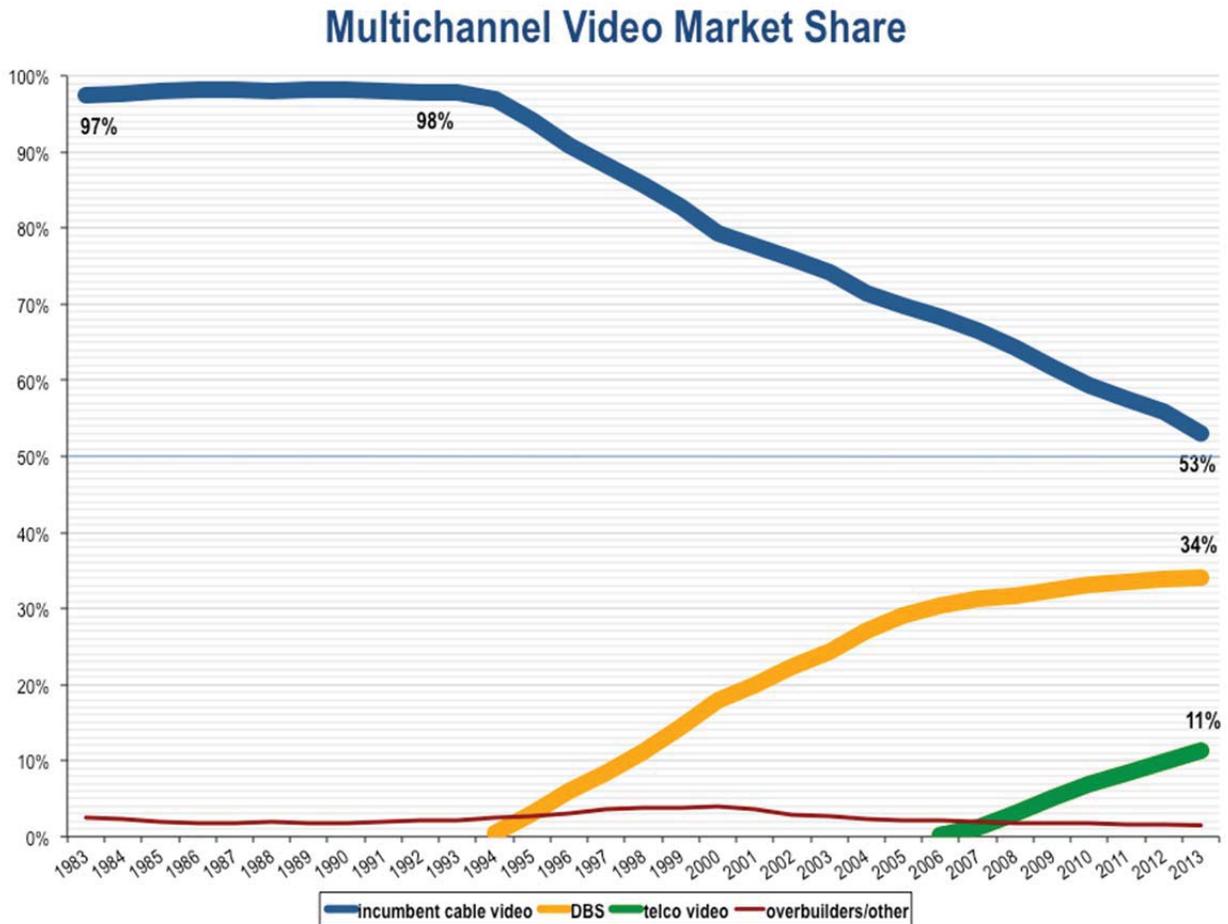
² D. Carr, *Barely Keeping Up in TV's Golden Age*, New York Times, (Mar. 9, 2014), http://www.nytimes.com/2014/03/10/business/media/fenced-in-by-televisions-excess-of-excellence.html?_r=0.

³ “The addition of ancillary devices onto what had been a dumb box has made us the programming masters of our own universes. Including the cable box — with its video on demand and digital video recorder — and Apple TV, Chromecast, PlayStation, Roku, Wii and Xbox, that universe is constantly expanding. Time-shifting allows not just greater flexibility, but increased consumption. According to Nielsen, Americans watched almost 15 hours of time-shifted television a month in 2013, two more hours a month than the year before.” *Id.*

I. MVPDS COMPETE VIGOROUSLY FOR CUSTOMERS THROUGHOUT THE NATION.

A. Cable’s Share of the MVPD Market Continues to Diminish.

As numerous parties have demonstrated over the last decade of this proceeding, competition in the multichannel video marketplace is intense, dynamic, and irreversible. Every year, the choices available to consumers continue to expand. As the number of consumers subscribing to a multichannel video services other than those offered by a cable operator shows, competition has irreversibly taken hold. In these comments, as requested by the Commission, we provide updated data through the end of 2013.



Source: NCTA Analysis of SNL Kagan Data

Over the past two decades, cable operators' share of MVPD customers has steadily eroded, from 98% to 53%. The two national DBS companies have grown from near-zero to become the second and third largest MVPDs. While the impressive growth rate of DBS companies between 1994 and the mid-2000s has slowed, DBS continues to attract new customers and grow its portion of the market; their share of MVPD customers, 33% in 2012, climbed to 34% by the end of 2013.

Moreover, the slowing growth of DBS reflects, to a large extent, the introduction and growth of even more competition from additional MVPDs. In 2006, the major telephone companies entered the multichannel marketplace in force. For the past eight years, they have experienced growth rivalling the earlier growth spurt of DBS. In 2008, the telcos had a mere three percent of all MVPD customers, but in just six years that percentage has reached 11%.

The telcos' growth in market share has been accompanied by continued growth in the number of homes to which their service is available. A growing number of households can choose from among four or more competitive providers of multichannel video service. Not only do these alternative providers serve more than 45% of MVPD customers as a whole, they are among the largest MVPDs. Indeed, as of 2013, four of the six largest MVPDs are *not* incumbent cable operators. The two national DBS companies, DirecTV and Dish, rank second and third in subscribership among all MVPDs.⁴ Meanwhile, AT&T and Verizon have climbed to fifth and sixth place in just a few short years.⁵

Furthermore, there are new facilities-based providers entering this competitive market. In 2012, for example, Google launched Google Fiber in Kansas City, Kansas. Google Fiber is an overbuilder that offers multichannel video service combined with broadband Internet service

⁴ NCTA Analysis of SNL Kagan Data.

⁵ *Id.*

capable of delivering Gigabit speeds; Google Fiber even offers a free broadband Internet option. In 2013, Austin, Texas and Provo, Utah were added as expansion cities, and in February of 2014, Google announced up to nine more metropolitan areas being considered for installation of Google Fiber.⁶

Structurally, increasing innovation and new entrants are strong indicators of a vibrantly competitive marketplace. Across the MVPD marketplace, cable, DBS, and telco overbuilders are offering increased channel capacity, and new digital services – all to best meet consumer desires and tastes. Experimentation with new services illustrates this point. Each MVPD offers more video content than ever before. As ever-present online, print, and television advertising makes clear, cable operators and their DBS and telco competitors are constantly seeking to attract new customers and keep existing customers through promotional offerings, discounts, and technological innovations.⁷

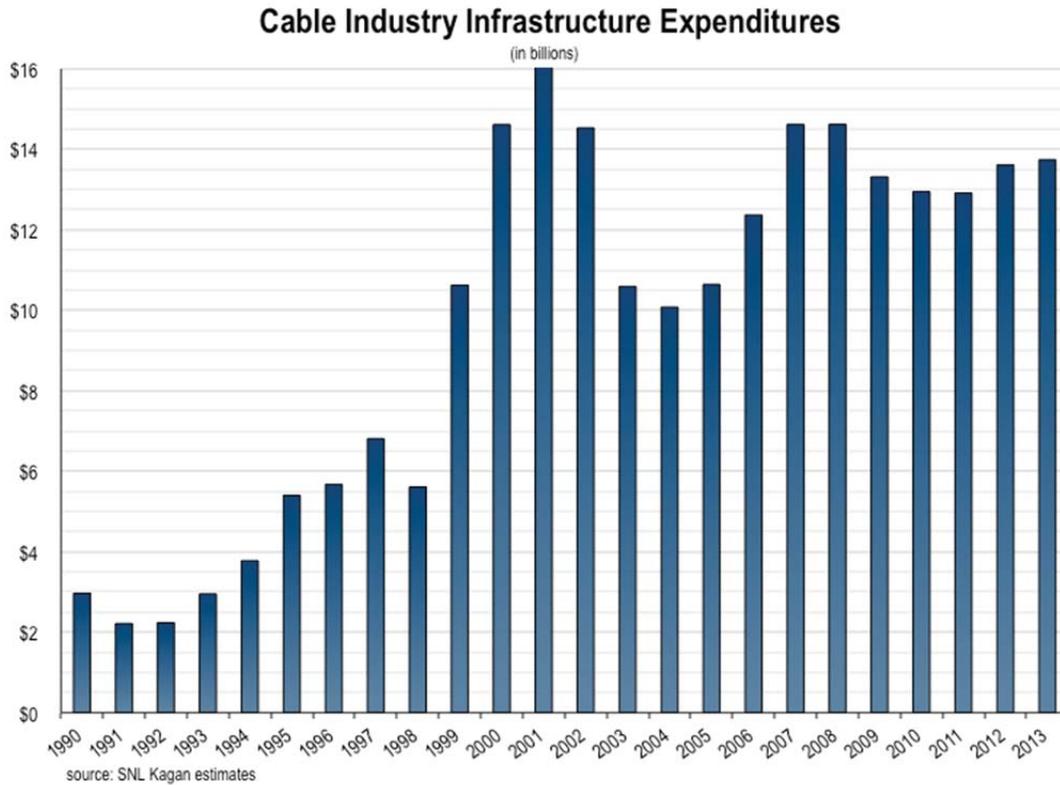
B. Cable Operators Continue to Invest Heavily in New Services and Infrastructure.

In a competitive video market, retaining satisfied customers requires much more than offering a high quality service. Customers have been conditioned to expect ever *higher* quality, more choices, and the latest technology. Each year, cable operators invest billions of dollars in infrastructure upgrades to improve their video service offerings, as well as to offer ever more robust Internet and digital telephone services. Since 1996, cable companies have invested over \$210 billion in infrastructure, including almost \$14 billion in 2013 alone. Continued investment

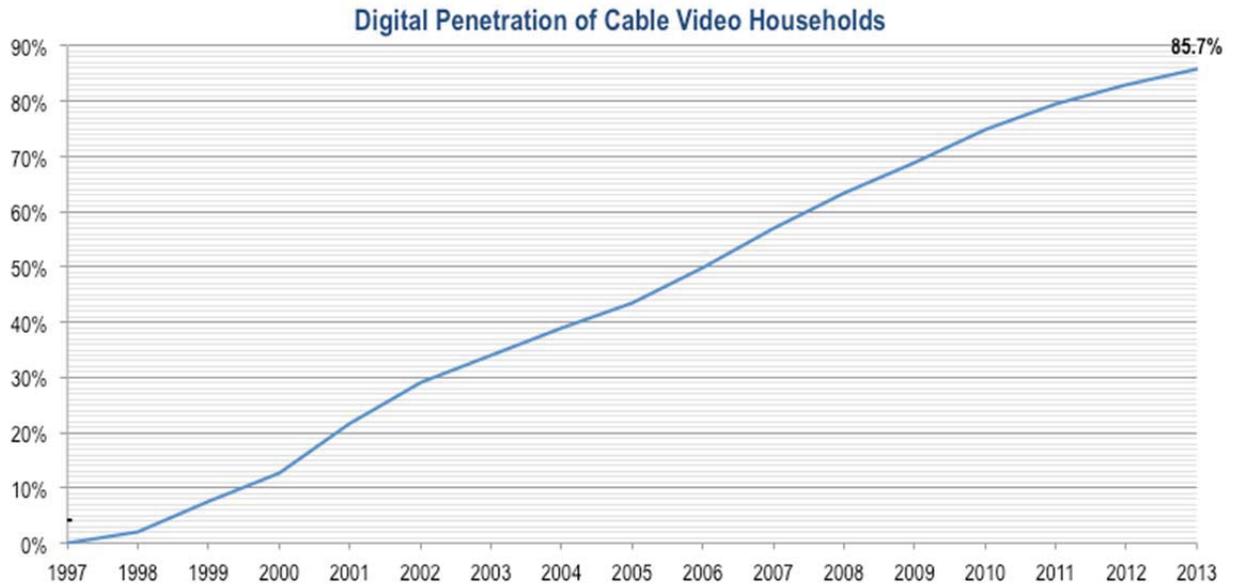
⁶ Jeff Baumgartner, *Google Fiber Eyes 34-Market Expansion*, Multichannel, (Feb. 19, 2014), <http://www.multichannel.com/distribution/google-fiber-eyes-34-market-expansion/148393>.

⁷ See, e.g. Comcast/Xfinity TV Commercials: <http://www.ispot.tv/brands/74x/comcast-xfinity>; On-line ad for Time Warner Triple Play <https://www.timewarnercablebundledeals.com/?tfn=855-889-7057>; Cox On-line Ads for Residential Service, <http://ww2.cox.com/residential/tv.cox>; Verizon TV Commercials, http://www.youtube.com/channel/UCDF1rHyRH8LcxbHX5_mrZ0w; Dish TV Commercials, <http://www.youtube.com/channel/UC6GeJoEZULSYiyKs8UhGiVw>.

in advanced infrastructure capable of supporting the most recent innovations is a key feature of today's MVPD marketplace.



The tens of billions of dollars that cable operators invested in their networks each year transformed their networks for the next generation of video distribution. This massive transformation from analog to digital networks not only increased channel capacity, provided higher quality video and audio, and enabled video-on-demand and DVR services; it also laid the foundation for high-speed Internet service, which is, in turn, transforming not only the video marketplace but the entire marketplace for information and communications. The increased channel capacity provided by digital has led to more robust tiers of digital service, providing consumers more programming options than ever before. Today more than 86 percent of cable customers have digital service.



Competition allows no company to rest on its laurels. By continually upgrading their service offerings with innovative technology, cable operators have conditioned their customers to await and expect enhancements to existing services as well as the “next big thing.” And cable continues to deliver, investing in new infrastructure and technology in pursuit of the next great differentiator. For instance, almost all major operators have developed smartphone and tablet apps that allow their customers not only to control their set-top box from their living room sofa but also to set their DVR from afar, to stream cable programming on their phones and tablets, and even to download programming for later viewing without a Wi-Fi connection.⁸

Many successful new programs are intrinsically tied to the technological offerings adopted by cable operators. Networks like AMC, TBS, and USA are continuing to set ratings records with shows like *The Walking Dead* and *The Big Bang Theory*.⁹ The first episode of the fourth season of *The Walking Dead* recorded more than 16.1 million total viewers, far more than

⁸ See *infra* pp. 14.

⁹ NCTA Analysis of Nielsen Data.

the 12.4 million who watched the season three finale.¹⁰ Rather than having to catch each episode when it airs, it is clear that customers are taking advantage of DVRs and video-on-demand to “catch up” with their favorite shows.¹¹ This strongly signals cable and programming providers that audiences now expect full control over the what, when, and where of “their” shows.

Cable providers have adapted quickly, offering new options and bundles of services tailored to fit the full spectrum of consumer preference, including “catching up” with popular shows. Such options include combinations of TV, DVR, video-on-demand and Internet service. Packages include a range of devices from a single set-top box to multiple recording devices with terabytes of recording space. These personalized packages, which include tiered options for basic through premium cable as well as bundles including phone and Internet at varying service levels, enable consumers to compare and contrast multiple sources for all their video viewing devices, and choose the best set of options at the best price for each individual – exactly the result that competition is supposed to produce.¹²

II. ONLY A SMALL PERCENTAGE OF CABLE PROGRAMMING NETWORKS ARE VERTICALLY INTEGRATED WITH CABLE SYSTEMS.

The 1992 Cable Act reflects Congress’s concern not only with the scarcity of competitive alternatives to cable systems but also with the large portion of cable program networks controlled at the time by cable operators. Congress feared that cable operators had the power to impede development of additional program networks by refusing to carry unaffiliated networks or by

¹⁰ AMC Blog, *The Walking Dead Season 4 Premier Breaks Series Record With 16.1 Million Viewers*, (Oct. 14, 2013) <http://blogs.amctv.com/the-walking-dead/2013/10/the-walking-dead-season-4-premiere-breaks-series-record-with-16-1-million-viewers/>.

¹¹ *Id.*

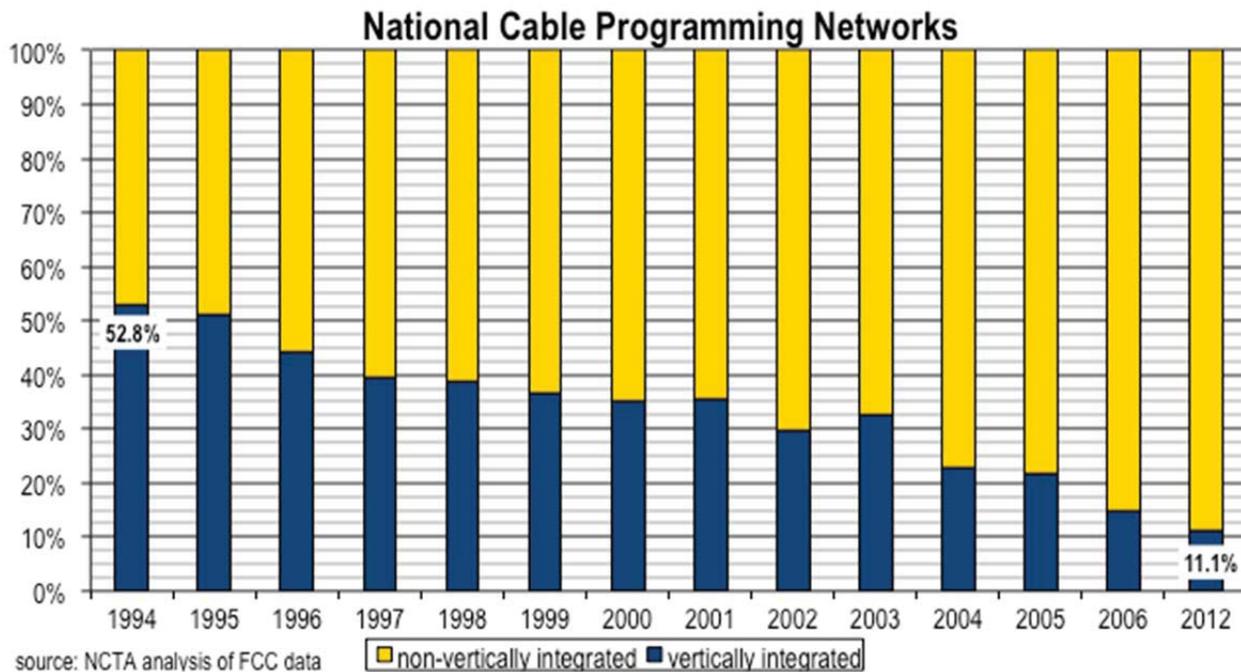
¹² See, e.g. Comcast Xfinity Customer Offers, <http://www.comcast.com/Corporate/Learn/Bundles/bundles.html> (last visited Mar. 9, 2014); Time Warner Cable Digital Cable TV Plans & Packages, <http://www.timewarnercable.com/en/residential-home/tv/digital-cable-tv.html> (last visited Mar. 9, 2014); Cox Channel Lineup, <http://ww2.cox.com/residential/tv/channel-lineup.cox> (last visited Mar. 9, 2014); Optimum TV Pricing, <http://www.cablevision.com/digital-cable-tv/pricing.jsp> (last visited Mar. 9, 2014).

insisting on an ownership stake in return for carriage. With the rise of hundreds of new unaffiliated program networks since the 1992 Act and the dis-integration of many previously vertically integrated companies, these concerns are no longer meaningful.

In the last twenty years, the channel capacity of cable systems has enormously increased, and a vast number of channels and program networks have emerged to fill those channels – and only a handful of networks are vertically integrated with cable operators. As past Video Competition reports have documented, the percentage of program networks affiliated with cable operators has continued to decrease since 1994, dropping from 53% to just over 11% in 2012.¹³ As video content continues to expand online and on demand and yet more program networks are introduced, the Commission has recognized that it has become virtually impossible to keep track of the number of networks now available to consumers.¹⁴ But in such an environment, there is no reason to expect that vertical integration between cable operators and cable program networks will increase above the current low level.

¹³ *Annual Assessment for the Status of Competition in the Market for the Delivery of Video Programming*, Fifteenth Report, 28 FCC Rcd 10496 (2013) ¶ 38 (“Fifteenth Report”); *Annual Assessment for the Status of Competition in the Market for the Delivery of Video Programming*, Fourteenth Report, 27 FCC Rcd 8610 (2012) ¶ 42 (“Fourteenth Report”).

¹⁴ See Fourteenth Report, ¶ 43 n.96.



Today, only three of the top 20 most viewed cable networks are controlled by cable operators.¹⁵ No matter what threat Congress once believed that cable operators posed to independent programming networks, it no longer exists in today’s market. Cable operators no longer own, jointly or separately, a significant number of the most popular networks. Even if they had the incentive to refuse to carry independent networks, cable operators do not control enough content to fill the gaps. The competition sought by Congress has spread much too far for any MVPD to extinguish.

III. INNOVATIVE NEW PRODUCTS ARE ENABLING CONSUMERS TO VIEW VIDEO PROGRAMMING ACROSS ALMOST ANY IP-ENABLED CONNECTED DEVICE.

The widespread availability of broadband Internet access has spurred yet more innovation in the marketplace for video content. While the large majority of television households continue to subscribe to cable or a competing MVPD service, more and more of these subscribers are also viewing video content delivered over the Internet. Both startups and established content

¹⁵ NCTA Analysis of Nielsen Media Research Data.

providers alike are struggling to meet consumer demand for Internet video content. And cable operators are responding to consumers; desires to watch their cable programming where they want on the devices they want. Everyone, from the largest technology firms to college students, seems to have an idea for how tomorrow's video content should be viewed. And while MVPDs continue to provide hundreds of channels – and thousands of video-on-demand programs – on an increasing number of IP-enabled devices, the Internet promises to bring yet more content and more viewing options to video customers.

A. New Online Video Distributors Are Providing Additional Content To Connected Devices.

As more and more consumers use the Internet to access and view video, the market for services from Online Video Distributors (OVDs) has explosively increased. A multitude of companies are delivering a vast array of products. Business models range from “all-you-can-eat” video streaming options and subscriptions to more traditional single-item video rentals. Although Internet video still is largely complementary to traditional multichannel video service, it does compete directly with certain services MVPDs offer (e.g., VOD), as well as for consumers' attention and entertainment dollars and increasingly content. Notable, content providers no longer are reliant on MVPDs to succeed and remain viable, but instead can choose a variety of ways to monetize their content, including their own websites, advertiser-supported content aggregators, subscription video libraries, or any combination thereof.

In one model, consumers can purchase and download individual episodes or movies from digital retailers like the iTunes Store and Amazon Video. While in the past these downloaded videos may seem to have been completely disconnected from the television, today's marketplace provides a range of alternative equipment to push online content directly to the big screen. Gaming devices, Internet-enabled DVRs, and connected Blu-ray players enable consumers to

find, stream, and download Internet content to their sets without requiring the use of a computer at all. “Smart TVs”, with advanced electronics and network hardware, come right out of the box with apps for online video. Sales of such sets reached more than 76 million last year, only a few short years after their introduction.¹⁶

New streaming services have also established their place in the living room and on the go. From Netflix’s monthly subscription to YouTube’s ad-supported and user-uploaded content, streaming video services are a testament to the robust Internet video marketplace and the infrastructure that supports it. Such is the demand for streaming video that a number of standalone devices dedicated to receiving Internet content on TV sets are now available. Some, like VeeBeam, enable consumers to transmit anything that is on their computer screens via Wi-Fi to their television set.¹⁷ Others, like AppleTV and Roku devices, provide direct and easy-to-access links to major OVDs, making Internet content just a few button presses away from the couch.

There are new entrants and variants introduced almost every day. Amazon is developing a “Kindle TV” set-top box to compete with Apple TV and Roku;¹⁸ Sony has tentatively reached a deal with Viacom to let subscribers to its planned new video subscription service receive live cable network programming the same way they use Netflix or Hulu;¹⁹ even Target is testing the

¹⁶ Charles Arthur, *Boot up: Chromebook numbers, smart TV sales, Nadella to staff, and more*, The Guardian, (Feb. 5, 2014) <http://www.theguardian.com/technology/blog/2014/feb/05/microsoft-smart-tv-phablet>.

¹⁷ *See Veebeam: How It Works*, Veebeam, Ltd. (Mar. 12, 2013), <http://www.veebeam.com/products/how-it-works/>.

¹⁸ *See Report: Amazon planning TV set-top box for March launch*; USA Today (Feb. 21, 2014), <http://www.usatoday.com/story/tech/personal/2014/02/21/amazon-planning-tv-box/5677833/>.

¹⁹ Brian Stelter, *Sony and Viacom Reach Tentative Deal to Stream Cable Channels*, New York Times, (Aug. 15, 2013), <http://www.nytimes.com/2013/08/16/business/media/sony-and-viacom-reach-tentative-internet-tv-deal.html>.

video market with its new “Target Ticket” video streaming service.²⁰ Google has also introduced “Chromecast” – an accessory that plugs into a TV’s HDMI port and allows the user to stream video, share tabs from its Google Chrome browser, or play music from smartphones, tablets or computers on the big screen, and Roku and others now offer similar devices. While the diversity of products is impressive, it is the rapid growth and scale of these OVDs that is truly astounding.

As of its 2013 4th quarter report, Netflix alone had 31.7 million domestic streaming customers, dwarfing even the largest MVPDs.²¹ While YouTube’s ad-supported business model makes comparison difficult, the company claims more than six billion hours of video are watched each month.²² Hulu, another streaming video provider, now has more than 5 million subscribers, a 2 million increase over the prior year.²³ In June 2013, Apple reported that its iTunes customers were purchasing an average of 800,000 TV episodes per day.²⁴ Simply put, OVDs are having a significant impact on the video marketplace, content providers’ ability to reach consumers, and consumers’ ability to watch what they want, when they want, how they want, where they want.

The rapid growth of online service providers is also reflected in Internet usage statistics. Netflix has gone from 24% of aggregate traffic in the first half of 2012 to more than 28% (and

²⁰ Jeff Baumgartner, *Target Tests Video Streaming Service - ‘Target Ticket’ Beta Touts Access to 15,000 Titles*, MultiChannel News, (May 20, 2013), <http://www.multichannel.com/distribution/target-tests-video-streaming-service/143390>.

²¹ Claire Atkinson, *Netflix Ends Q4 with astounding 31.7M subscribers*, NY Post, (Jan. 22, 2014) <http://nypost.com/2014/01/22/netflix-soars-on-sky-high-subscriber-numbers/>; Matthew Garrahan, *Netflix Subscriber Numbers surge*, Financial Times, (Jan. 22, 2014) <http://www.ft.com/cms/s/0/e4dde050-83b7-11e3-aa65-00144feab7de.html#axzz2vbeIaSRc>.

²² YouTube, *Statistics*, (last visited Mar. 12, 2014), <http://www.youtube.com/yt/press/statistics.html>.

²³ Mike Hopkins, *A Strong 2013*, Hulu.com (Dec. 18, 2013), <http://blog.hulu.com/2013/12/18/a-strong-2013/>.

²⁴ Press Release, Apple, Inc., *HBO Go & WatchESPN Come to Apple TV (June 19, 2013)*, <http://www.apple.com/pr/library/2013/06/19HBO-GO-WatchESPN-Come-to-Apple-TV.html>.

almost 32% of all downstream traffic) in the second half of 2013.²⁵ YouTube, has grown from 13.8% to 16.8% (and nearly 19% of all downstream traffic) over the same period.²⁶ According to Sandvine, streaming video and other “Real-Time Entertainment” services are a key factor in Internet traffic’s impressive 20-30% annual growth rate.²⁷ As broadband Internet reaches new customers and Internet services are integrated into even more devices, growth among OVDs shows little sign of slowing. Online video will continue to offer new choices and a large variety of content to video customers.

B. MVPD Providers Are Offering Access To Their Programming From Almost Any Connected Device.

As cable competes head-to-head with other MVPDs, it too is developing new ways, in partnership with content providers, to distribute television content and VOD programming to IP-enabled devices – both outside the home via broadband connections to the Internet, and inside the home via IP cable services. Consumers, increasingly, want access to programming on the device in their pocket and the tablet on their desk. To meet this demand, cable operators have developed apps and services for some of the most popular mobile platforms.²⁸ And they are also

²⁵ Sandvine, Inc., *Global Internet Phenomena 1H 2012* 21 (2012); Sandvine, Inc. *Global Internet Phenomena 2H 2013* 6 (2013).

²⁶ Sandvine, Inc., *Global Internet Phenomena 1H 2012* 6 (2012); Sandvine, Inc. *Global Internet Phenomena 2H 2013* 6 (2013).

²⁷ Sandvine, Inc. *Global Internet Phenomena 2H 2013* 6 (2013).

²⁸ Daniel Nations, *How to Watch TV on Your iPad*, About.com (last visited Mar. 11, 2014), http://ipad.about.com/od/iPad_Accessories/a/How-To-Watch-Tv-On-Your-iPad.htm (“An alternative ... is simply downloading apps available from your cable provider or major networks. Many major providers like Cox TV, Time Warner Cable and DirectTV offer apps ... that will allow you to watch TV... You can also access premium content via apps, with some restrictions based on your provider. [HBO](#), [Cinemax](#), [Showtime](#) and [Starz](#) all have apps that work with *some* providers.”); Electronista Staff, *Time Warner Cable Enables Away From Home Streaming on Select Channels*, Electronista.com (updated April 16, 2013), <http://www.electronista.com/articles/13/04/16/twc.tv.app.to.stream.cable.channels.local.channels.omitted/>; Cox, *Cox TV Apps*, Cox Communications Inc. (last visited Mar. 11, 2014), <http://ww2.cox.com/residential/tv/tv-apps.cox>.

using mobile applications to enable their customers to select or record programming for later viewing on their television sets.²⁹

Of particular note, cable companies are streaming live video to their subscribers' mobile devices. Using various technologies, subscribers can now access streaming content over the Internet on nearly any connected devices outside the home. Moreover, cable companies have adapted to customers' preferences for using a wide variety of devices (such as game consoles) and screens (such as smart phones and tablets) *inside* their homes to watch programming that used to be available only on their television sets and via cable set-top boxes. Even more advanced options are in the works. In 2013, for example, Time Warner Cable announced plans to make its rented set-top boxes directly competitive with off-the-shelf alternatives. Time Warner Cable's "souped up DVR" will contain six tuners and one terabyte of storage space as well as convert digital cable channels into IP video for delivery throughout the home on connected TVs and other IP devices such as smart phones and tablets.³⁰

Comcast is also working to deploy advanced services to its customers through its new X1 set-top box. Xfinity TV customers with the X1 can use a tablet or smartphone to set up a recording schedule for an entire series, access cloud services, while the device will automatically recommend new content.³¹ Meanwhile, Charter Communications is also trialing a groundbreaking cloud-based user interface that would transform nearly all existing set-top boxes into

²⁹ *App Center Remote DVR Manager*, Bright House Networks, (last visited Mar. 7, 2014) http://brighthouse.com/central-florida/my-services/app-center_rdv; Ask Charter: Motorola Online DVR Manager, Charter Communications, (last visited Mar. 7, 2014) [.http://www.myaccount.charter.com/customers/support.aspx?supportarticleid=2838](http://www.myaccount.charter.com/customers/support.aspx?supportarticleid=2838).

³⁰ Steve Donohue, *Time Warner Cable to Deliver "Souped up" DVR in 2013*, FierceCable, (Jan. 31, 2013) <http://www.fiercecable.com/story/time-warner-cable-deploy-souped-dvr-second-half-2013/2013-01-31>.

³¹ Press Release, Comcast Corporation, *Introducing X2: The Next Generation of Comcast's X1 Entertainment Operating System*, (Jun. 11, 2013) <http://corporate.comcast.com/news-information/news-feed/introducing-x2>.

state-of-the-art devices.³² Cox Communications' is also working on its Contour service which delivers personalized content to TVs and tablets. It also allows for up to seven individual profiles, access to a Record 6 DVR that lets subscribers record six shows at once, storage for up to 1,000 hours of recorded programming and the ability to move shows from the Contour App to the TV.³³

Cable companies are also enabling their customers to access cable programming outside the home. Comcast Xfinity customers, for example, can now watch more than 50 networks live via the Xfinity TV Go app.³⁴ Comcast customers can also download and watch more than 25,000 on-demand videos to mobile devices for viewing anywhere.³⁵ Cablevision has also been steadily expanding the channels included in its "Optimum: TV to GO" service. The service now includes everything from ESPN and the Food Network to HGTV.³⁶ Charter's recently launched Cable TV App, provides over 100 channels of live streaming in-the-home, and a subset outside-the-home.³⁷

The investments cable operators have made in new apps and services are beginning to pay off. Consumers are able to access programming from their cable operator on nearly any

³² Jeff Baumgartner, *Charter Tests Cloud UI in Fort Worth*, Multichannel News, (Oct. 10, 2013) <http://www.multichannel.com/distribution/charter-tests-cloud-ui-fort-worth/146026>.

³³ Richard Lawler, *Cox Cable Launches personalized Contour experience with iPad app, 2TB 6 tuner DVR*, Engadget, (Aug. 7, 2013) <http://www.engadget.com/2013/08/07/cox-cable-contour-6-tuner-dvr-ipad/>.

³⁴ Press Release, Comcast Corporation, Xfinity TV Go Network Roster Tops 50 with Latest Update (Mar. 19, 2014) <http://corporate.comcast.com/news-information/news-feed/comcast-customers-can-now-stream-more-than-50-live-channels-anytime-anywhere>.

³⁵ Dorothy Pomerantz, *Comcast-Time Warner Merger Could Make TV Everywhere a Reality*, Forbes, (Feb. 13, 2014) <http://www.forbes.com/sites/dorothypomerantz/2014/02/13/comcast-time-warner-merger-could-make-tv-everywhere-a-reality-but-youll-have-to-pay-up/>.

³⁶ Mike Farrell, *Cablevision, Scripps Reach TV Everywhere Deal; Food, HGTV, Travel Available on Desktops, Laptops Inside and Outside Home*, MultiChannel News, (May 22, 2013) <http://www.multichannel.com/cable-operators/cablevision-scripps-reach-tv-everywhere-deal/143448>.

³⁷ Jeff Baumgartner, *Charter Launches TV Streaming App*, Multichannel News, (Nov. 5, 2013) <http://www.multichannel.com/distribution/charter-launches-tv-streaming-app/146498>.

mobile device with an Internet connection and a screen. The days of cable content “stuck” on an operator-provided box are long over. As technology and services improve, TV Everywhere will allow customers authenticated access to live content, VOD and DVR functions on nearly any device.

C. The Video Device Marketplace Has Never Been More Innovative.

In the last *Video Competition Report*, the Commission concluded that “[t]oday, the CPE [*i.e.*, video device] marketplace is more dynamic than it has ever been, offering consumers an unprecedented and growing list of choices to access video content.”³⁸ In the year since data was compiled for that *Report*, the video device marketplace has continued its relentless expansion. As demonstrated above, cable operators, DBS providers and telephone companies are vigorously competing to attract and retain multichannel customers, including through technological innovations (such as advanced features on video devices) to enhance the value of their services to consumers.

As NCTA’s President and CEO Michael Powell recently detailed in a letter to Chairman Wheeler, CES 2014 demonstrated the remarkable variety of technological approaches and the dizzying speed with which MVPDs and other video providers are offering consumers the ability to enjoy multichannel, Internet, and other video content through multiple devices in and outside of the home.³⁹ Today, consumers can buy retail smartphones and tablets, Smart TVs, gaming devices, and all sorts of other devices that will enable them to watch cable, satellite, or telco TV programming. As the *Notice* suggests, rather than relying upon CableCARDs, these and other services are delivered via IP-based apps.⁴⁰

³⁸ Fifteenth Report, ¶ 354.

³⁹ Letter from Michael Powell to Chairman Wheeler, CS Docket No. 97-80 (February 5, 2014).

⁴⁰ *Notice* at ¶ 64.

As Michael Powell's letter to Chairman Wheeler observed:

These exciting developments are not arising from regulatory intervention or from technology mandates. They are driven by marketplace imperatives: consumer demand for mobility and new distribution platforms. Cable operators, other video distributors, equipment manufacturers, and application developers all are working to satisfy that demand. As new technologies, development communities, and rapid innovation cycles offer new opportunities, and as programmers move more confidently into IP distribution and software clients, cable operators are meeting these marketplace imperatives in ways that protect the copyright interests of our content suppliers. Of course, cable operators continue to support third-party use of CableCARDs, but all of the exciting innovations continue to demonstrate how rapidly the marketplace is moving beyond CableCARD technology.⁴¹

Cable operators and other video providers are clearly racing to deliver their services via IP apps, over home networks, and through many other technologies. Still, for many consumers, leasing a set-top box from their service provider is sufficient and most desirable. It provides services that their existing TVs and other devices do not support. And it shifts all risk to the service provider for maintenance, ownership, and obsolescence, so that consumers may easily change providers, upgrade service, and swap equipment whenever they choose. They need not worry about limited warranties, missing the next new feature, early termination fees, or waiting two years for a device upgrade.⁴²

However, because of the FCC's integration ban rule,⁴³ consumers and operators that elect leased boxes are paying a penalty in unnecessary expense and energy costs. The *Notice* asks what impact the integration ban is having on the cost and deployment of video devices.⁴⁴ By one

⁴¹ *Id.* at 6.

⁴² Leasing can also save money. For example, leasing an advanced DVR for \$17.95/mo. is still less expensive than buying a mid-range Roamio Plus for \$399 and paying the monthly service fee of \$14.99 (\$19.99 without a commitment). This has long been the case. When Consumer Reports addressed the "lease or buy" question regarding DVRs back in 2006, it concluded that "[f]or high-definition recording, a DVR from your cable or satellite provider is the best way to go – it's convenient and you need not worry about investing in obsolescent equipment." *Consumer Reports*, November, 2006, at 35.

⁴³ 47 C.F.R. §76.1204(a)(1) (second sentence).

⁴⁴ *Notice* at ¶ 66.

estimate, CableCARD technology adds approximately \$56 to the cost of an operator's box.⁴⁵ We estimate that the costs attributable to the integration ban exceed \$1 billion for the cable industry. Based on EPA figures, cable subscribers also collectively foot the bill for roughly 500 million kilowatt hours consumed by CableCARDS each year. By all measures, the costs of this misguided rule clearly outweigh its benefits.

Further evidence of the integration ban's incoherence is that these financial costs and energy burdens are borne only by cable subscribers and not video customers of satellite providers, like DirecTV and DISH, or of telco overbuilders like AT&T. Despite these providers being vigorous competitors, they have no CableCARD obligations or have taken the position that the CableCARD rules do not apply to them, creating an un-level playing field. At the time the rule was adopted, cable had a very large market share. Today, that share has shrunk from roughly 90 percent to just over 50 percent. As noted above, DirecTV and DISH are the second and third largest providers of multichannel video programming and AT&T is the fifth largest MVPD. The integration ban – which is either not applied to or enforced against any of those MVPDs – hampers traditional cable operator's as well as Verizon's ability to compete fairly in this dynamic marketplace and there is no substantive justification for this disparate regulatory treatment.

It is important to note that, even if the integration ban were to be repealed, cable operators will still be required to provide CableCARDS or other separate security for devices purchased at retail. Third-party set-top box makers, like TiVo, will still be able to build boxes

⁴⁵ See *James Cable, LLC et al., Requests for Waiver of Section 76.1204(a)(1) of the Commission's Rules*, Memorandum Opinion and Order, 23 FCC Rcd 10592, ¶ 9 n.30 (2008) (a CableCARD adds an average of about \$56 in cost to a set-top box). The most recent evidence filed with the FCC (January 28, 2013) by one large cable operator seeking a waiver was that "the cost of including a CableCARD and card interface in its current set-top boxes is in the \$40 to \$50 range." Letter from Paul Glist, Counsel for Charter Communications, Inc., to Marlene H. Dortch, FCC, MB Docket No. 12-328 (January 28, 2013) (Charter's experience is that the cost of including a CableCARD and card interface in its current set-top boxes is in the \$40 to \$50 range).

that use CableCARDS and cable operators will be required to support those devices.⁴⁶ Beyond a cable operator's continued legal obligation, it will have a strong incentive to continue to support CableCARDS, given that 45 million CableCARD-enabled set-top boxes are in customer homes and that many operators are using TiVo as a primary leased set-top box.⁴⁷

The *Notice* asks, “[w]hat effect, if any has the D.C. Circuit’s [*EchoStar*] decision had on the deployment and support for CableCARDS.”⁴⁸ The short answer is none. Cable operators have supported CableCARD-enabled devices both before and after the court’s decision vacating certain CableCARD-related technical rules as evidenced by TiVo’s successive DVRs, Ceton’s equivalent for PCs, and Samsung’s new CableCARD Streaming Media Player. But the relative paucity of retail CableCARD devices and the abundance of other video devices on which consumers are enjoying MVPD programming is unequivocal testimony that allowing the marketplace to offer a diversity of approaches is far more successful than attempting to prescribe a uniform government mandated technology.

As we have explained in comments on TiVo’s Petition to reinstate the rules vacated in *EchoStar*,⁴⁹ even if the technical rules were not reinstated, cable operators would still support CableCARDS or other separate security approaches. Marketplace incentives – 45 million leased

⁴⁶ As the *Notice* recognizes (at ¶ 66), the Commission retains a backstop under the “separable security” rule that remains intact and unchallenged. The Commission can determine whether or not a separable security solution provided for retail devices is working. The Commission monitors the market by requiring CableCARD inventory, deployment, price, and trouble reports every 90 days from the five largest companies, and has complaint procedures to consider any disputes over whether CableCARDS are performing the conditional access functions required under the separable security rule.

⁴⁷ Repeal of the integration ban also will not interfere with opportunities for innovation in retail set-top boxes. CableCARD technology is limited to decrypting video programming so that customers can view the channels to which they have subscribed. It does not prevent manufacturers from pursuing new retail products and services now or in the future. The innovative TiVo Roamio DVR today is much more advanced than prior TiVo boxes, yet the CableCARD is the same.

⁴⁸ *Notice* at ¶ 66.

⁴⁹ Comments of NCTA on TiVo, Inc.’s Petition for Rulemaking, CS Docket No. 97-80 (September 16, 2013); Comments of NCTA on TiVo, Inc.’s Petition for Clarification or Waiver, CS Docket No. 97-80 (February 14, 2014).

set-top boxes relying on CableCARDS and cable operators' need to attract and retain customers using TiVo (and other customer-owned CableCARD-enabled devices) – ensure that operators will support CableCARDS in retail devices. And, as the *Notice* recognizes,⁵⁰ the FCC retains a backstop under the “separable security” rule that remains intact and unchallenged. The FCC can determine whether or not a separable security solution provided for retail devices is working. The FCC monitors the market by requiring CableCARD inventory, deployment, price and trouble reports every 90 days from the five largest operators, and has complaint procedures to consider any disputes over whether CableCARDS are performing the conditional access functions required under the separable security rule.

The *Notice* also invites comment on whether the “lack of interoperability among CPE devices” affects competition in the video marketplace.⁵¹ It does not. In a highly competitive market with rapid innovation, diversity and flexibility of device approaches is a strength, not a “non-interoperability” weakness. Diversity and flexibility embrace a market-driven, innovation-inducing environment that allows multiple, competing approaches to address similar technological challenges. This dynamic invites the innovation that promotes U.S. leadership and competitiveness, is followed in the video and device marketplaces, and allows voluntary consensus standards to emerge naturally without sacrificing innovation or competition.

Evidence of this diversity and flexibility is widespread in the device and video marketplaces today. While the cable industry works in multi-stakeholder home networking forums like DLNA and MoCA so that the home network itself can serve as a sharing mechanism and vehicle for interoperability based on consensus-based processes, DLNA and MoCA are not

⁵⁰ *Notice* at ¶ 66 (noting that the *EchoStar* decision did not vacate “the Order that required cable operators to separate security and base that separate security on a commonly-used interface or technical standard”).

⁵¹ *Notice* at ¶ 65.

the exclusive approach for IP connectivity. TiVo, for example, uses proprietary IP approaches in the home to share content from a TiVo DVR to a TiVo client. Every Smart TV, gaming station, and tablet creates its own ecosystem, with each manufacturer free to adopt non-interoperable security, operating system, media player, application environment, connectors, and content libraries. No one has prescribed PlayReady or OMA, iOS or Android, QuickTime or Windows Media Player, USB or Lightning. The result has been beneficial diversity and competition. MVPDs write apps for different platforms (such as iOS and Android) and enter into bilateral agreements (such as delivering services to gaming platforms and Roku, or video-on-demand to TiVo). Rights differ, platforms differ, and what consequently appears on those platforms differ. Again, this should be seen as a strength in the marketplace, not as a weakness to be addressed by government intervention.

CONCLUSION

For many years, NCTA has shown and asserted in these video competition proceedings that competition in the video programming marketplace is flourishing. By now, this has become not only an obvious truism but an understatement that fails to convey the breathtaking changes that are taking place literally every day. Consumers can choose among a multitude of video providers and a virtually unlimited array of programming content. Today's marketplace far exceeds anything that Congress could have envisioned when it enacted the 1992 Act and directed the Commission to report annually on the status of video competition. In truth, each day's marketplace seems to exceed anything that could have been imagined yesterday.

Respectfully submitted,

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