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OUTLIVING ITS USEFULNESS:
A LAW AND ECONOMICS ARGUMENT FOR SUNSET OF SECTION 629

Abstract: As part of the sweeping Telecommunications Act of 1996, Congress directed the Federal Communications Commission to adopt regulations to promote the commercial availability of cable set-top boxes. To date, the agency's efforts to implement Section 629 of the Act have been a total failure, despite considerable effort and at least a billion dollars spent. While some continue to encourage the Commission to pursue implementation of this statute by imposing rigid technological standards on the multichannel video industry via the agency's new "AllVid" paradigm, there is little hope for a successful implementation of such heavy-handed interventions. The video marketplace is presently highly dynamic and increasingly competitive, and the regulatory-created retail market envisioned by Section 629 is today an inefficient market organization. Section 629, now fifteen years old, has outlived its usefulness. In this POLICY BULLETIN we set forth what we believe to be sound economic, legal and evidentiary arguments to support a sunset of Section 629 under that section's unique statutory provisions. Sunset hinges on the definition of "fully competitive," which we define as a condition where market forces are sufficiently strong to eliminate the need for government regulation. After a review of the evidence using this definition, we find that there is a plausible legal and evidentiary case for sunset.

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I. Introduction

As part of the sweeping Telecommunications Act of 1996, Congress directed the Federal Communications Commission to adopt regulations "to assure the commercial availability … of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming … from manufacturers, retailers, and other vendors…."[1] Yet, despite considerable effort and at least a billion dollars (if not more) spent to implement the agency's CableCard regime,[2] the FCC recently conceded that its efforts to implement Section 629 were a total failure.[3] Undeterred by its billion dollar policy dud, the Commission nonetheless decided to make the set-top box debate a central plank of its *National Broadband Plan* by introducing its next iteration of government-mandated interoperability—the "AllVid" device.[4]

According to the Commission, the successful implementation of Section 629(a) "could serve as a powerful driver of adoption and utilization of broadband."[5] Unfortunately, and as subsequently recognized by the FCC, the linkage between the set-top box and broadband

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1 Communications Act Section 629, 47 U.S.C. § 549(a).

2 *See, e.g., In re Video Device Competition,* FCC 10-60, NOTICE OF INQUIRY, 25 FCC Rcd. 4275 (rel. April 21, 2010) at ¶10 (hereinafter "*AllVid NOI*"), and Statement of Commissioner Meredith Baker ("As we consider a long-term solution, I hope that we recall valuable lessons from the CableCard regime. First, our technological mandates come with significant costs. By one estimate, the cost of CableCard compliance for the cable industry alone—costs passed on to cable consumers—has totaled nearly one billion dollars. Second, we should be careful not to mandate particular technological solutions that would freeze into place the current state of technology.").

3 *AllVid NOI*, *id.*; *see also In re Implementation of Section 304 of the Telecommunications of 1996,* FCC 10-181, THIRD REPORT AND ORDER AND ORDER ON RECONSIDERATION, 25 FCC Rcd. 14657 (rel. October 14, 2010) (hereinafter *Third Report*) at ¶ 4 ("Unfortunately, the Commission's efforts to date have not developed a vigorous competitive market for retail navigation devices that connect to subscription video services."); CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN, Federal Communications Commission (March 16, 2010) (available at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296935A1.pdf) (hereinafter the *National Broadband Plan*) at Chapter 4, p. 52 ("Despite Congressional and FCC intentions, CableCards have failed to stimulate a competitive retail market for set-top boxes.")

4 *National Broadband Plan, id.* at XII; *see also AllVid NOI, supra* n. 2 at ¶ 16 ("we introduce and seek comment on a model that would require MVPDs to provide a small, low-cost adapter that would connect to proprietary MVPD networks and would provide a common interface for connection to televisions, DVRs, and other smart video devices, as described below. This adapter, a further development of the concept of the "gateway device" recommended in Chapter 4 of the *National Broadband Plan*, would perform the conditional access functions as well as tuning, reception, and upstream communication as directed by the smart video device. The adapter and the smart video device would communicate with each other using a standard interface, but each adapter would be system specific to a particular MVPD in order to communicate with its network").

5 *Id.* at p. 18.

adoption is feeble.[6] Internet video services, including over-the-top services such as Roku and Hulu, operate entirely independent of the set-top box. The modern television set, computers, and mobile handsets smoothly integrate video content from a variety of sources, a task neither assisted nor impeded by the Multichannel Video Programming Distributor's ("MVPD") set-top box. In effect, the goal of Section 629 has already been achieved—millions of consumers are getting video services over Internet-connected devices acquired from sources other than their MVPD provider. Consequently, any effect of the set-top box on video-driven broadband demand is of second-order significance, and perhaps a day late. Nor is it sensible for public policy to impose significant costs on providers and consumers simply to promote broadband deployment as another video entertainment delivery technology. The benefits of video entertainment are of a private nature. Moreover, the giant leaps in technological progress in video content delivery since 1996 are no friend of Section 629. Even the most casual observer or staunchest skeptic cannot fail to see the rapid pace of innovation in video markets today, whether in delivery technology, content sources, or even content creation. At its best, regulation is ham-handed and sluggish, and thus the prospect for net beneficial interventions exists only in the most static of environments.

Given the above, is there a compelling policy reason for the Commission to continue with its quixotic attempt to try to develop a commercial retail market for set-top boxes? Clearly no. As noted above, the FCC has repeatedly conceded that its "separable security" approach to Section 629 is an uncontested failure; to try again seems, at this point, to be the triumph of hope over experience. Moreover, the video market is presently undergoing substantial transformation and experiencing rapid innovation and, as such, the timing for a regulatory-mandated technology standard could not be worse. Similarly, forcing a commercial retail market for set-top equipment by regulatory fiat is arguably poorly motivated because providers have no demonstrated anti-competitive incentives with regard to the set-top box (to the contrary, MVPDs are strongly motivated to provide low-cost, high-feature set top equipment to consumers) and regulation is unlikely to lower price, improve quality, or increase innovation.[7] Indeed, the Commission has repeatedly acknowledged that its CableCARD rules increase prices and reduce network deployment.[8] Finally, but perhaps most importantly, AllVid's ultimate

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6 *See AllVid NOI*, *supra* n. 2 at ¶ 14, where the full extent of the agency's commentary on broadband adoption was limited to: "Commenters expressed some disagreement about whether network-agnostic video devices would spur broadband use and adoption".

7 For a more thorough exegesis, *see* T.R. Beard, G.S. Ford, L.J. Spiwak, and M. Stern, PHOENIX CENTER POLICY PAPER NO. 42, *Wobbling Back to the Fire: Economic Efficiency and the Creation of a Retail Market for Set-Top Boxes* (December 2010) (http://www.phoenix-center.org/pcpp/PCPP41Final.pdf).

8 *See In re Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, FCC 05-76, SECOND REPORT & ORDER, 20 FCC Rcd. 6794 (2005) at ¶ 29 ("we believe it is likely that

(Footnote Continued….)

failure is essentially inescapable by the mere fact that the commercial market envisioned by Section 629 is today an inefficient market organization, and markets abhor inefficiency.[9]

We hold no monopoly on skepticism regarding the successful implementation of Section 629. Regarding CableCARD, Commissioner Michael Copps observed, "[t]he intent, we all recall, was to spur on a competitive retail market to provide consumers more choice. But it didn't happen. In many ways, the outcome of our pursuit has been the opposite of what was intended."[10] The Commissioner's take on the renewed effort, which he supports, is likewise pessimistic--noting that the AllVid proposal is "a particularly ambitious one"[11]--and comes with a warning: "I would just caution my colleagues on how much work and pushing from this Commission will be required to reach the happy world of gateway device availability. … [T]he sad saga of the CableCARD illustrates the pitfalls that await us at every corner."[12] Commissioner Copps also suggests that success requires "true private sector-public sector coordination and partnering," yet many in the private sector are opposed to regulatory-mandated technology standards, including MVPDs, programmers and other content suppliers. Success, therefore, faces significant hurdles. Similarly, Commissioner McDowell observed that "technological innovation continues to outpace the government's ability to keep up" and indicates he will "remain humble about the government's ability to predict the pace and direction of technological developments. If nothing else, our experience in implementing Section 629 should remind us of the value of modesty in rulemaking."[13]

Commissioner McDowell goes further by suggesting that given the difficulty of implementing Section 629 "some may want to ask Congress to consider new options."[14] Congress need not be bothered to end the futile effort, however, since the Act provides the Commission the authority to do so itself by sunsetting the regulation. In this POLICY BULLETIN, we set forth what we believe to be sound economic, legal, and evidentiary arguments to

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consumers will face additional costs in the short term as a result of the prohibition on integrated navigation devices."); *see also Charter Communications v. FCC,* 460 F.3d 31, 41-42 (D.C. Cir. 2006); *Comcast Corp. v. FCC,* 526 F3d 763, 767 (D.C. Cir. 2008) ("the FCC has conceded that the integration ban may impose short-term costs on cable companies and consumers.").

9 *Wobbling Back to the Fire, supra* n. 7.

10 *Third Report, supra* n. 3, Statement of Commissioner Copps.

11 *Id.*

12 *Id.*

13 *AllVid NOI, supra* n. 2, Statement of Commissioner McDowell.

14 *Id.*

support a sunset of Section 629 under the relevant statutory provisions. The paper is outlined as follows: In Section II, we outline the parameters of Section 629, and show that the ability to invoke the sunset provisions will hinge on how the Commission defines "fully competitive." Given that Congress never provides a definition of "fully competitive," in Section III we propose a definition that is flexible, economically sound, suitable to the industry, and relevant for evaluating the removal of regulation. In particular, we recommend the use of an "effectively competitive" or "workably competitive" standard. In Section IV, we apply this definition and find that there is a plausible legal and evidentiary case for sunset. Conclusions and policy recommendations are in the final section of the paper.

II. Statutory Background

Section 629(a) of the Act directs the FCC to

> … adopt regulations … to assure the commercial availability, to consumers of multichannel video programming … , of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming … from manufacturers, retailers, and other vendors not affiliated with any multichannel video programming distributor.[15]

Under Section 629(e), the Commission may sunset these regulatory interventions upon making the following determinations:

(1) The market for multichannel video programming distributors is fully competitive;

(2) The market for converter boxes, and interactive communications equipment, used in conjunction with that service is fully competitive; and

(3) Elimination of the regulations would promote competition and the public interest.[16]

Plainly, sunset hinges largely on the definition of "fully competitive" under Sections 629(e)(1) and (2), but the Act provides no formal definition of the term. Nor is "fully competitive" a term of art in Economic science; there are myriad interpretations of what constitutes a "fully competitive" marketplace. While the Commission has issued some preliminary dicta on how it might define the relevant product and geographic markets for purposes of a potential Section 629(e) petition (as discussed infra), it too has shied away from providing a definition of "fully

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15 Communications Act Section 629, 47 U.S.C. § 549(a).

16 47 U.S.C. § 549(e).

competitive."[17] Given this lack of guidance and precedent, the Commission certainly has the flexibility to establish the parameters of the term "fully competitive" to evaluate any petition for sunset.[18] In our view, the agency's definition of "fully competitive" should be economically legitimate, reflect the economic realities of the communications business, and correspond to the statutory objective of assessing the value of economic regulation. We provide such a definition in the next section.

An analysis of the current state of competition under Sections 629(e)(1) and (2) is not the sole consideration for sunset, however. Section 629(e)(3), which focuses on the affirmative promotion of competition and the broader public interest, clearly requires the agency to consider the burden of regulation on economic outcomes. Indeed, Congress expressed concern in the statute itself that the regulations the FCC may promulgate to implement Section 629 may themselves impede competition and have "the effect of freezing or chilling the development of new technologies and services"[19] or, just as importantly, perhaps be contrary to the public interest for other reasons. Given that the stated purpose of the 1996 Act was to reduce regulation whenever possible,[20] Section 629(e)(3) provides the opportunity to sunset a regulatory effort with little hope of a positive net social return.

The Commission has not been silent on the statutory requirements for a sunset of Section 629. In its 1998 *Navigation Devices Order*, the agency addressed the issue. Most of the discussion is non-committal and centers on market definition.[21] In that regard, the Commission defines "MPVD services" as the relevant product market for purposes of 629(e)(1)[22] and "any navigation

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[17] *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices,* FCC 98-116, REPORT AND ORDER, 13 FCC Rcd. 14775 at ¶¶ 109-113 (1998) (hereinafter "*Navigation Devices Order*"), *aff'd, General Instrument Corp. v. FCC,* 213 F.3d 724 (D.C. Cir. 2000).

[18] *See generally, Chevron, U.S.A., Inc. v. Natural Resources Defense Council,* 467 U.S. 837 (1984).

[19] *See* Implementation of the Telecommunications Act of 1996, CONFERENCE REPORT NO. 104-458 (January 31, 1996) at 181.

[20] The preamble of the Telecommunications Act of 1996 directed the FCC to adhere to a "pro-competitive, deregulatory national policy framework." *See* Joint Explanatory Statement of the Committee of Conference, S. REP. NO. 104-230, at 113 (1996) (Conf. Rep.) ("*Joint Explanatory Statement*").

[21] *Navigation Devices Order, supra* n. 17 at ¶ 110 ("a relevant product market and a relevant geographic market must be determined and analyzed").

[22] *Id.* ("For purposes of Section 629(e), the market for MVPD programming services is an appropriate product market because the broader market definition encompasses the full range of MVPD services available to consumers").

devices subject to Section 629" as the relevant product market for navigation devices.[23] This choice of market directly coincides with the statutory setup, and is important is some respects (as discussed below). On geographic market definition, however, the statute is silent, and the Commission makes no formal determination, discussing both narrow and wide market boundaries.[24]

The agency makes two other findings of note. First, while the Commission did not require satellite providers to comply with the CableCARD integration ban, the Commission concluded that DBS was not wholly exempt from the Section 629 mandate.[25] Indeed, the agency intends for satellite providers to participate in its AllVid scheme.[26] Consequently, by the market definition discussion above, the equipment for satellite providers is part of the product market for navigation devices. Second, the agency does not reject the statutory "effectively competitive" standard, as defined in Section 623(l), as a useful analogy for Section 629(e)'s notion of "fully competitive."[27] As discussed below, a definition of "effective competition" is a much more realistic standard than "perfect competition", particularly in light of how the FCC has implemented the "effective competition" standard.[28]

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[23] *Id.* at ¶ 111 ("With respect to the market for equipment, we conclude that any navigation device subject to Section 629 shall constitute the appropriate equipment market for Section 629(e) purposes").

[24] *Id.* ("The Commission has stated that the relevant geographic market for assessing MVPD competition is local and its extent can be defined by the overlap of the 'footprints' of the various service providers. We believe that local geographic markets, akin to Nielsen's 'areas of dominant influence,' or Standard Metropolitan Statistical Areas, as determined by the Office of Management and Budget, may be an appropriate geographic market definition").

[25] *Id.* at ¶ 111 ("Congress did not exclude DBS from the reach of Section 629, even though the competitive state of DBS services was known at the time of the enactment of the 1996 Act"); *id.* at ¶ 112 ("we cannot conclude that the rules in their entirety should never be applied by virtue of the 'sunset' criteria").

[26] *AllVid NOI, supra* n. 2.

[27] *Navigation Devices Order, supra* n. 17 at ¶ 113.

[28] The effective competition standard likely would be satisfied under most geographic market definitions given the ubiquitous presence of satellite video and its one-third share of the national market (exceeding the 15% required share). In the 2009 Report on Cable Industry Prices, 31.65% of subscribers are in communities that have applied for and received designation as "Effectively Competitive" markets. *See In the Matter of Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992*, REPORT ON CABLE INDUSTRY PRICES, MM Docket No. 92-266 (rel. February 14, 2011) at Att. 1 (available at: http://www.fcc.gov/Daily_Releases/Daily_Business/2011/db0214/DA-11-284A1.pdf). This figure likely understates the present share for a number of reasons. First, this figure is from the 2009 survey, and this share is nearly double that from the last report in 2008 (18.1%); *In the Matter of Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992*, REPORT ON CABLE INDUSTRY PRICES, MM Docket No. 92-266 (rel. January 16, 2009) at Att. 1-b (available at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-53A1.pdf). Second, in many cases, franchise authorities were not certified to regulate cable rates, so an "Effectively Competitive"

(Footnote Continued….)

I. How to Define "Fully Competitive"?

As noted above, the 1996 Act provides no direct statutory definition of "fully competitive" in the context of Section 629(e). Implementing the section, therefore, requires the agency to assign meaning to the term. In this section, we explore two possible definitions. At the extreme, the term "fully competitive" could be associated with the textbook notion of "perfect competition." As we have explained in prior research and do so again here, this definition is entirely inappropriate for communications markets.[29] Perfect competition is a Nirvana—a theoretical perfection no real world market can attain. More sensibly, we turn to the economic concept of "workably competitive" or "effectively competitive" to give meaning to the term "fully competitive." This approach is consistent with earlier Commission findings on the sunset provision of Section 629(e). Relying on these more practical concepts of competition, we are able to construct a definition of fully competitive that is economically legitimate, reflects the economic realities of the communications business, and corresponds to the statutory objective of assessing the social value of economic regulation.

A. *"Fully Competitive" Should Not Be Defined as "Perfectly Competitive"*

It is not uncommon for the term "fully competitive" to be linked to the textbook notion of "perfectly competitive," at least loosely. In the context of Section 629(e), this association would be a mistake. With perfect competition, there are large numbers of perfectly-informed buyers and sellers free to enter and exit the market at will, all engaged in transactions for a single, homogeneous product in a centralized market.[30] The long-run equilibrium in such a setting has price equal to marginal cost and all firms, each identical to the others, earn zero economic profit as a consequence of the free entry and exit condition.[31] Perfect competition is a useful theoretical benchmark for a frictionless economy. It is not, however, a useful benchmark for expected performance in the communications industry. Moreover, the static outcomes of the model of perfect competition ignore entirely the costs and benefits of regulation. Sunset, and even forbearance more generally, addresses the need for regulation, with full recognition that regulation may affect market outcomes in undesirable ways. Section 629(e)(3), for example,

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determination provides no benefits to the cable system. Third, in some cases, the legal costs and the expense of obtaining highly local data do not justify a petition.

29 *See* G.S. Ford and L.J. Spiwak, PHOENIX CENTER PERSPECTIVE NO. 10-08: *The Impossible Dream: Forbearance After the Phoenix Order* (December 16, 2010) (available at http://www.phoenix-center.org/perspectives/Perspective10-08Final.pdf).

30 R. Ekelund Jr. and R. Tollision, ECONOMICS (1994) at Ch. 9.

31 *Id.*

expressly recognizes that the regulation may impede competition or may conflict with the public interest in other ways. Regulation is costly; any meaningful definition of fully competitive used in the context of a sunset or forbearance provision must account for that fact. (See the discussion regarding Figure 1, infra.)

The equilibrium outcome of primary interest from the model of perfect competition is that price is equal to the marginal cost of production. Given the high fixed and sunk costs necessary for the production of communications services, this outcome is entirely infeasible in communications markets. Price must exceed marginal cost by a sufficient amount to cover the fixed costs of production. The supply-side conditions are understood by the Commission. In the *National Broadband Plan*, for example, the agency observed, "building broadband networks—especially wireline—requires large fixed and sunk investments." As a result, the agency concluded, "the industry will probably always have a relatively small number of facilities-based competitors," but also that "the lack of a large number of [] providers does not necessarily mean competition among broadband providers is inadequate."[32]

Indeed, perfect competition is a dubious benchmark, and this fact is well established in literature on telecommunications regulation. In the TELECOMMUNICATIONS REGULATION HANDBOOK, for example, a discussion of costs and pricing notes that:

> … marginal cost is below average costs, and setting a regulated price equal to marginal cost will not allow the operator to recoup all of its costs. In order for the operator not to lose money and go out of business, the regulator had to set at least some prices above marginal cost.[33]

Plainly, the marginal cost outcome of the model of perfect competition is incompatible with markets with high fixed and sunk costs of production. Put another way, marginal cost pricing is not an equilibrium in communications markets. As noted by Jean Tirole in reference to duopolistic competition, "both firms charging the competitive prices, [price equals marginal cost], is generally not an equilibrium."[34] Since the equilibrium of perfect competition is never compatible with the equilibrium in communications markets, including cable television, then it seems clear that perfect competition is not a useful benchmark.

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32 *National Broadband Plan, supra* n. 3 at p. 38-39.

33 H. Intven and M. Tetrault, TELECOMMUNICATIONS REGULATION HANDBOOK (2000) at p. B-17. *See also, more generally,* C. Krouse, THEORY OF INDUSTRIAL ECONOMICS (1990), p. 55 ("In a homogeneous goods industry the presence of increasing returns in production creates difficulties in using perfect competition as a benchmark for social efficiency. Prices set equal to marginal cost in this case will lead to losses").

34 J. Tirole, THE THEORY OF INDUSTRIAL ORGANIZATION (1995) at p. 214.

This fact is not lost on the Commission. Indeed, there are many instances where the FCC itself devises policy in full recognition of the prevalence of fixed and sunk costs and their implications for pricing.[35] For example, when the agency sets a price for certain types of payphone calls, it concluded:

> Because payphones have significant fixed costs that must be recovered, the price for each type of payphone call must exceed the marginal cost of the call if the payphone is to earn a normal rate of return. Stated another way, if every call is priced at the marginal cost of that call, the payphone would be unprofitable, because it would fail to recover the predominant fixed costs of providing the payphone.[36]

Likewise, in its 2008 SATELLITE COMPETITION REPORT, the agency observes,

> … metrics of the unit price-cost margin [] are difficult to interpret as indicators of market power and the extent of competitive rivalry in industries where firms, such as satellite carriers, utilize technologies with large fixed costs and substantial economies of scale. …. Pricing output at marginal cost … is therefore unprofitable for satellite firms, since such pricing will produce losses equal to the fixed costs of production.[37]

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[35] *See, e.g., National Broadband Plan, supra* n. 3 at 47 ("economies of scale, scope and density that characterize telecommunications networks"); *In the Matter of Implementation of Section 19 of the Cable Television Consumer Protection and Competition Act of 1992, Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming,* FIRST REPORT, FCC 94-235, 9 FCC Rcd. 7442 (rel. September 28, 1994), Appendix H at ¶¶ 377-383 (discussing how the presence of high sunk costs may have a decisive effect on the evolution of local market structure and the possible trade-offs between the number of actual competitors in any local cable market and the intensity of price competition that might prevail); *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers,* FCC 03-36, REPORT AND ORDER AND ORDER ON REMAND AND FURTHER NOTICE OF PROPOSED RULEMAKING, 18 FCC Rcd. 16978 (rel. August 21, 2003) at n. 244; *In the Matter of Special Access Rates for Price Cap Local Exchange Carriers,* FCC 05-18, ORDER AND NOTICE OF PROPOSED RULEMAKING, 20 FCC Rcd. 1994 (January 31, 2005) at n. 187; *In the Matter of Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services,* FOURTEENTH REPORT, FCC 10-81, 25 FCC Rcd. 11407 (rel. May 20, 2010) (hereinafter "*Fourteenth CMRS Report*") *passim.*

[36] *In Re Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996,* THIRD REPORT AND ORDER, AND ORDER ON RECONSIDERATION OF THE SECOND REPORT AND ORDER, FCC 99-7, 14 FCC Rcd. 2545 (1999) at ¶32.

[37] *In re Second Annual Report and Analysis of Competitive Market Conditions with Respect to Domestic and International Satellite Communications Services,* FCC 08-247, 23 FCC Rcd. 15170 (Oct. 16, 2008) at ¶ 90.

Even former FCC Chairman Reed Hundt, in an article published in the FEDERAL COMMUNICATIONS LAW JOURNAL, observes:

> In an industry with large sunk costs and small marginal costs, like most of the telecommunications industry, pricing that goes to marginal cost will not provide an adequate return to the investors who provide capital. Investors will be cautious about investing money upfront because *ex post* competition could drive prices to nonremunerative levels.[38]

Plainly, the inapplicability of the model of perfect competition in communications markets is widely accepted. In fact, the price equals marginal cost outcome could lead to a more direct legal challenge of using perfect competition as a performance benchmark. For example, viewed in the context of the traditional "just and reasonable" ratemaking standard found in Section 201, to define "fully competitive" as "perfectly competitive" sets a *de facto* benchmark standard which is "confiscatory" and outside of the "zone of reasonableness," since marginal cost pricing does not permit the recovery of all costs in communications markets characterized by high fixed and sunk costs.[39]

In sum, while perfect competition is a legitimate theoretical concept, its policy relevance is less clear. Perfect Competition is a textbook Nirvana that fails to reflect the economic realities of the communications industry (and nearly every other industry). The static outcomes of the perfectly competitive equilibrium are wholly incompatible with the supply-side economic conditions of communications markets. Furthermore, the static outcomes of perfect competition provide no insight into the statutory objective of assessing the value of economic regulation. A narrow focus on price-cost margins says nothing about the costs of regulation, and such costs must be contemplated by statute. Moreover, the statute itself recognizes that the regulation may impede competition and, therefore, a refusal to sunset the provisions due to a lack of competitive perfection conflicts with Congressional intent. As discussed below, economic research provides significant guidance on a more meaningful standard for the Commission to adopt when defining "fully competitive" under Section 629(e).

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[38] R. Hundt and G. Rosston, *Communications Policy for 2006 and Beyond*, 58 FEDERAL COMMUNICATIONS LAW JOURNAL 1, 6 (2006).

[39] *See, e.g., Verizon v. FCC*, 535 U.S. 467, 481 (2002) (and citations therein); *Farmers Union Central Exchange v. FERC*, 734 F.2d 1486, 1502 (D.C. Cir.), *cert. denied,* 469 U.S. 1034 (1984). Nevertheless, the FCC is not always so judicious in its acknowledgement and application of economic principles. For example, in its recent *Phoenix Forbearance Order,* the agency establishes a marginal cost pricing standard for Section 10 forbearance—a standard that will be impossible to satisfy. For a further exploration of this important topic, *see Forbearance After the Phoenix Order, supra* n. 29.

B. *"Fully Competitive" is Better Defined as "Effectively Competitive" or "Workably Competitive"*

Economists have long been dissatisfied with the rigid concept of perfect competition as a standard for actual market outcomes. Few, if any, markets are perfectly competitive, but this fact does not warrant widespread government intervention. As a result, economists began to develop the concept known as "workable" or "effective" competition.[40] Generally, workable or effective competition implies the absence of significant monopoly power, where the adjective "significant" implies sufficient market power that would warrant the costs of attempting to reduce it through antitrust or regulatory action.[41]

An excellent sketch of the issue is provided by William Shepherd, in his book THE ECONOMICS OF INDUSTRIAL ORGANIZATION:

> The basic question is how many comparable competitors are needed for effective competition: as many as 100 or 20 or eight, or instead as few as two? … What gives an effective degree of competition has been debated with increasing rigor since Adam Smith's Wealth of Nations in 1776. … After 1870, neoclassical economists began to carry the concept of competition to its pure, "atomistic" extreme, deriving the precise efficiency results found in beginning economics texts. … Competition came to be defined as an equilibrium result enforced by the relentless pressures of numberless tiny competitors. Practical-minded observers have long disapproved of such models as too abstract and extreme. A strong degree of rivalry among several firms can give the same general degree of efficiency, while also providing for rapid innovation. This realistic view of the competitive process among a few rivals is often said to conflict with the neoclassical analysis of equilibrium among numberless firms in atomistic markets. … Yet no such conflict over the true nature of competition really needs to exist. [T]he aim has been only to have intense competition, so that firms are under strong mutual pressure. … One cannot just count firms in judging the degree of competition. … At times, even if there are only two competitors, their rivalry may be intense. Though one of the two firms may get the upper hand for a while in a market, the other may soon fight back and equalize its share of the market and profits. Such a continuing rugged rivalry may stir great efforts from the firms and force price down close to the levels of their costs. Therefore,

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40 D. Kaserman and J. Mayo, GOVERNMENT AND BUSINESS: THE ECONOMICS OF ANTITRUST AND REGULATION (1995), pp. 100-1.

41 *Id.*

> effective competition is possible even when there are as few as two or several firms. … Competition is a process that can be effective when it is less comprehensive than in the ideal, pure case.[42]

Shepherd's observation that "even if there are only two competitors, their rivalry may be intense" and that "one cannot just count firms in judging the degree of competition" is exceedingly relevant for communications markets where the supply-side characteristics often lead to relatively concentrated equilibriums. Concentration, however, need not imply a lack of rivalry. In the *National Broadband Plan*, the Commission concurs, concluding, as noted above, that "the lack of a large number of [] providers does not necessarily mean competition among broadband providers is inadequate."[43]

An even more useful conceptualization of the issue is provided by economist Jesse Markham in the AMERICAN ECONOMIC REVIEW:

> A possible alternative approach to the concept of workable competition may be one which shifts the emphasis from a set of specific structural characteristics to an appraisal of a particular industry's over-all performance against the background of possible remedial action. Definitions of workable competition shaped along these lines might accept as a first approximation some such principle as the following: An industry may be judged to be workably competitive when, after the structural characteristics of its market and the dynamic forces that shaped them have been thoroughly examined, there is no clearly indicated change that can be effected through public policy measures that would result in greater social gains than social losses. Tautological though this type of definition might be, it at least avoids the pitfall of listing specific market conditions that can have very limited general applicability. Also, it would ascribe paramount importance to that which should be uppermost in the minds of those who formulate public policy-the possibility of prescribing appropriate remedial action. For, unless the concept of workable competition is to be an instrument of public policy, there is little reason for differentiating between workable and pure competition. But to frame definitions for public policy purposes without taking cognizance of the different structural features among industries and within the same industry at specific stages of development, and

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[42] W. G. Shepherd, THE ECONOMICS OF INDUSTRIAL ORGANIZATION (1985) at 9-10.

[43] *National Broadband Plan*, *supra* n. 3 at p. 38-39; *see also* G.S. Ford, T.M. Koutsky, L.J. Spiwak, *Competition After Unbundling: Entry, Industry Structure and Convergence,* 59 FED. COMM L.J. 331 (2007).

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> without recognizing at the outset the political and economic limitations placed upon policymaking authorities, would be to ignore the primary purpose of such definitions, i.e., to indicate wherein an industry does not operate in the public's interest and what appropriate remedial action is possible.[44]

Here we have a very sensible approach to assessing competition in the context of a sunset provision (or forbearance more generally). Markham recommends the joint assessment of "a particular industry's over-all performance," which includes not only the observed market outcomes but also the efficacy of "possible remedial action." In other words, while we may observe prices in excess of marginal cost, and perhaps by a sizeable amount, this outcome cannot be viewed independent of the policymaker's ability to do something useful about it. Put another way, a claim of a "market failure" is not sufficient to warrant regulation or to postpone forbearance from regulation. Inseparable from the market outcome is whether some change "can be effected through public policy measures that would result in greater social gains than social losses."

This notion of workable competition can be illustrated using a simple graph. In Figure 1, we have a demand curve for a good labeled D. There are three prices: the monopoly price (P_M), the duopoly price (P_D), and the regulated price (P_R), with respective quantities Q_i. Assume marginal cost is zero (MC) and regulation imposes a fixed administrative burden set equal to the rectangular area **R** in the figure.[45]

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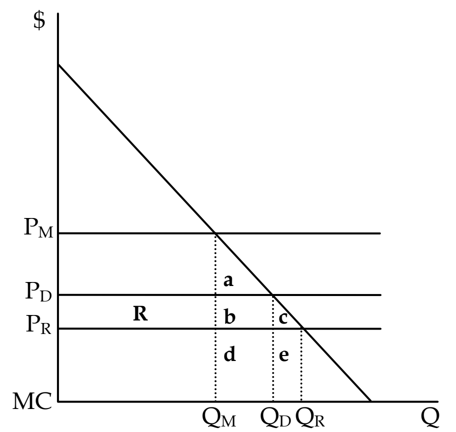
44 J. Markham, *An Alternative Approach to the Concept of Workable Competition*, 40 AMERICAN ECONOMIC REVIEW 349-361 (1950), at p. 361.

45 The choice of **R** is illustrative only and has nothing to do with the prices or quantities. The costs of regulation could take many forms other than a fixed administrative cost. Also, the cost of implementing regulation may be much higher in a duopolistic setting than under monopoly conditions.

Figure 1. Regulation and Welfare



If the choice is between monopoly and regulation (price-quantity combinations P_M, Q_M and P_R, Q_R), then the welfare gains are equal to the **abcde** less costs **R**, which is clearly positive. Alternately, if the choice is between duopoly and regulation (price-quantity combinations P_D, Q_D and P_R, Q_R), the welfare gain is only **ce** which is less than **R**. Thus, on economic welfare grounds (at least in the partial equilibrium analysis), regulation is too costly in the case of duopoly, even though regulation increases welfare in the case of monopoly.[46] (Notably, the implementation of cable rate regulation was based on the rule $P_R = P_D$ because rate reductions were based on the competitive differential).[47] In all cases, prices are well in excess of marginal cost, illustrating that the model of perfect competition offers little guidance on the question of the social value of regulation.

Interestingly, a formal definition of "fully competitive" is provided in the Encarta Dictionary. Encarta defines a *fully competitive service* as "a service for which market forces are sufficiently strong to eliminate the need for government regulation."[48] This general definition is

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46 *See* T.R. Beard, G.S. Ford, L.J. Spiwak and M. Stern, *A Policy Framework for Spectrum Allocation in Mobile Communications*, 63 FED. COM. L.J. 639 (2011) (available at: http://www.law.indiana.edu/fclj/pubs/v63/no3/Vol.63-3_2011-May_Art.-03_Beard.pdf).

47 *See* T. Hazlett and M. Spitzer, PUBLIC POLICY TOWARD CABLE TELEVISION: THE ECONOMICS OF RATE CONTROLS (1997) at pp. 26-29.

48 ENCARTA WORLD ENGLISH DICTIONARY (2009); *see also* ICT REGULATION TOOLKIT, § 2.3 (http://www.ictregulationtoolkit.org/en/Section.1687.html) ("In a fully competitive environment, there is a more limited need for regulation.").

useful in that, as with Markham, competition need not be textbook perfect to be fully competitive, just adequate enough to eliminate the likelihood of welfare-improving remedial action by either antitrust or regulation. This definition is consistent with the logic underlying the "effectively competitive" standard in the Section 623(l).

This notion of workably or effectively competitive is supported directly by the 1996 Act with regard to cable television markets. Specifically, Congress permitted the elimination of rate regulation for basic tier MVPD programming in markets that are subject to "effective competition." Section 623(l)(1) defines "effective competition" as

> (A) fewer than 30 percent of the households in the franchise area subscribe to the cable service of a cable system;
>
> (B) the franchise area is served by at least two unaffiliated multichannel video programming distributors each of which offers comparable video programming to at least 50 percent of the households in the franchise area; and the number of households subscribing to programming services offered by multichannel video programming distributors other than the largest multichannel video programming distributor exceeds 15 percent of the households in the franchise area;
>
> (C) a multichannel video programming distributor operated by the franchising authority for that franchise area offers video programming to at least 50 percent of the households in that franchise area; or
>
> (D) a local exchange carrier or its affiliate (or any multichannel video programming distributor using the facilities of such carrier or its affiliate) offers video programming services directly to subscribers by any means (other than direct-to-home satellite services) in the franchise area of an unaffiliated cable operator, which is providing cable service in that franchise area, but only if the video programming services so offered in that area are comparable to the video programming services provided by the unaffiliated cable operator in that area.

In subpart (A), deregulation is permitted when the cable system has a very low penetration. Deregulation in such cases has two sensible justifications. First, the benefits of regulation in low penetration markets may not be sufficient to offset the administrative costs of rate controls. The logic follows directly from Figure 1 above. Second, a low penetration may be indicative of competition from other sources. The remaining subparts define effective competition—that is, competition sufficient to warrant the removal of all rate regulations—as the presence of a single competitor offering service to at least half the market (at least in the most stringent case of subpart B and C). Effective competition, therefore, is defined by Congress as the presence of, essentially, *half a competitor* as the most stringent test. In subpart (D), there is no market overlap requirement.[49] Subpart (B) is the most stringent standard, requiring both a 50-percent overlap and 15-percent penetration by the rival. The threshold Hirschman Herfindahl Index ("HHI") for effective competition (and deregulation) under this section is 7,450.[50]

The Commission's actual implementation of the "effective competition" standard also indicates that perfect competition is unsuitable. In its review of basic cable deregulation in Montgomery County, Maryland, the Media Bureau concluded:

> There is no statutory basis to delay basic rate deregulation in a franchise area until the arrival of perfect competition there and the resolution of all issues between a cable operator and a franchise authority to the latter's satisfaction. Indeed, Section 623(b)(1) of the Act, which the County invokes, sets the standard for basic cable rates not at perfect competition, but at the level that would be charged if there were effective competition.[51]

Plainly, the Commission rejects the perfect competition standard when approving deregulation of cable television services.

Notably, we do not necessarily advocate the formal adoption of the provisions of Section 623(l)(1) as a test to see whether Section 629(e) is satisfied (nor do we reject it). Nevertheless, Section 623 is important in that Congress deliberately established a standard of effective competition that is far less than the textbook notion of "perfect competition," and codified the idea that even a little competition eliminates the need for regulation. Furthermore, as discussed above, in its *Navigation Devices Order,* the Commission acknowledged the "effectively competitive" standard is a suitable benchmark for a "fully competitive" MVPD marketplace,

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[49] With regard to LEC entry, it is the threat that matters. *See In re Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996,* FCC 99-57, REPORT AND ORDER, 14 FCC Rcd. 5296 (rel. March 29, 1999) at ¶ 11 (available at: http://www.fcc.gov/Bureaus/Cable/Orders/1999/fcc99057.txt) ("…the Cable Services Bureau has found that a LEC's presence can have a competitive impact on a cable operator before the LEC finishes installing its plant or rolling out its service. We see no reason from the record before us not to continue applying the LEC test in this way when the likelihood of impending competition throughout a substantial part of the incumbent cable operator's service area is established, the competitive service is commercially available, and potential subscribers in the franchise area served by the incumbent are reasonably aware that the service is either actually available to them or will be available within a reasonable time.").

[50] The calculation is $85^2 + 15^2$.

[51] *In re Comcast Cable Communications, LLC, on Behalf of Its Subsidiaries and Affiliates,* DA 10-1787, 25 FCC Rcd. 13340, MEMORANDUM OPINION AND ORDER (September 21, 2010) at ¶ 13.

though perhaps applying the overlap and penetration thresholds to a larger geographic area than just a franchise market.[52]

In light of this discussion, we propose to define *fully competitive* for purposes of Section 629(e) as a "condition where market forces are sufficiently strong to eliminate the need for government regulation."[53] As noted above, this definition has many advantages. First, it is drawn from the economic literature, and thus has academic legitimacy. Second, it is consistent with the underlying economic realities of the communications industry, where marginal cost pricing is infeasible. Third, it is a very good match for the problem at hand, where the sunset provision of Section 629(e) involves setting aside regulation, and explicitly requires the agency to consider the costs of intervention on both competition and the public interest. Fourth, the definition requires that there be some force operating on price sufficient to permit the removal of regulation.[54] Consistent with the "effective competition" standard in Section 623(l), that force could be the presence of a competitor (serving some portion of the market) exerting downward pressure on prices (or affecting quality or some other mode of rivalry). Fifth, by including the "need for government regulation" in the definition, the parameters of "fully competitive" can vary across issues, providing flexibility to the agency. Since the cost and benefits of regulation vary across interventions, the threshold level of "market forces" sufficient to make regulation unnecessary will not be uniform across all regulatory interventions. (In Figure 1, different conclusions can be drawn by altering the size of **R**.) Therefore, a finding of "fully competitive" for Section 629(e) need not translate to a finding of "fully competitive" in any other instance.

II. Satisfying the Statute

In order to sunset Section 629(a), Section 629(e) requires the Commission to make, at a minimum, a plausible argument that the market for multichannel video programming and the market for converter boxes and interactive equipment are "fully competitive." As noted above, for purposes of Section 629(e), we define "fully competitive" as a situation where market forces are sufficiently strong to eliminate the need for government regulation. We now discuss each determination in turn.

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52 *See* Section III, *infra*.

53 Implicit is that market forces are sufficient to protect consumers and ensure just and reasonable rates.

54 Regulation may be too costly even in the presence of monopoly.

C. *The Market for Multichannel Video Programming is "Fully Competitive" for Purposes of 629(e)(1)*

Given our definition of "fully competitive," the Commission could make several plausible arguments that the first prong of Section 629(e) is satisfied. In the *Navigation Devices Order,* the Commission did not finalize its position on a geographic market definition for MVPD services. Yet, regardless of whether we assume for purposes of Section 629(e)(1) that the market for multichannel video programming is local or national,[55] there are at least two competitors in every market—satellite television (DirecTV and Dish) is essentially ubiquitous and is a very real and significant competitor in the market. The most recent *Video Competition Report*, which draws conclusions based on 2006 data, observes,

> We find that almost all consumers are able to obtain programming through over-the-air broadcast television, a cable service, and at least two DBS providers. In some areas, consumers also may have access to video programming delivered by emerging technologies, such as digital broadcast spectrum, fiber-to-the-home facilities, or web-based Internet video.[56]

Similarly, in the *National Broadband Plan,* the agency observed, "four out of the top 10 MVPDs are not cable companies and represent 41% of MVPD subscribers."[57] Indeed, current conditions stand in stark contrast to when the FCC first issued its *Navigation Devices Order* back in 1998 where DBS was "still a relatively new entrant in the MVPD market…"[58] As such, customers have multiple choices of providers, and the number of choices is rising with the actual entry of telephone companies in many markets and over-the-top video services wherever broadband is available.[59]

While non-committal on market definition in the *Navigation Devices Order,* the Commission did suggest that Nielsen's Areas of Dominant Influence, or Standard Metropolitan Statistical Areas, "may be an appropriate geographic market definition."[60] These geographic areas are

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55 *See Navigation Devices Order, supra* n. 17 at ¶ 112 (the "relevant geographic market for assessing MVPD competition is local and its extent can be defined by the overlap of the 'footprints' of the various service providers.")

56 *In re Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming,* THIRTEENTH VIDEO COMPETITION REPORT, MM Docket No. 06-189, 24 FCC Rcd. 542 (rel. January 16, 2009) at ¶7.

57 *National Broadband Plan*, *supra* n. 3, at p. 51.

58 *Navigation Devices Order, supra* n. 17 at ¶ 112.

59 *C.f. Comcast Cable, supra* n. 51.

60 *Navigation Devices Order, supra* n. 17 at ¶ 111.

very similar to Nielsen's Designated Market Areas ("DMAs"), for which we have competitive information.[61] Recent evidence indicates that non-cable video delivery systems (or "alternative delivery systems" or "ADSs") account for at least 15% market share of television households in 203 of the largest 210 DMAs, satisfying the "effectively competitive" standard of Section 623(l) for almost every U.S. household.[62]

A "fully competitive" finding in the MVPD market under Section 629(e) should not be problematic before a reviewing court. For example, in striking down the Commission's *Cable Ownership Cap Rule*, the D.C. Circuit found, among other things, that DBS companies alone now serve approximately 33% of all subscribers (satisfying Section 623(l)(1)(B) if viewed at the national level),[63] and DirecTV and Dish Network each serve more customers than any cable company with the exception of Comcast.[64] Indeed, the court found that:

> … [the] record is replete with evidence of ever increasing competition among video providers: Satellite and fiber optic video providers have entered the market and grown in market share since the Congress passed the 1992 Act, and particularly in recent years. Cable operators, therefore, no longer have the bottleneck power over programming that concerned the Congress in 1992.[65]

Since this sentiment was expressed before over-the-top video had become a serious contender in video distribution, it is not unreasonable to expect a willingness by the court to accept a finding of a fully competitive MVPD market.

Finally, given that Congress price deregulated cable programming above "basic tier" services in the 1996 Act, we can also infer that Congress deemed the market for higher tier cable services to be "fully competitive" for purposes of Section 629(e). In fact, this inference was expressly intended by Congress. As observed at the time by Rep. Edward Markey,

> The pending legislation will deregulate the rates of most cable systems 3 years from now—in March 1999. The rationale for deregulating cable systems at that

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61 http://www.genesys-sampling.com/pages/Template2/site2/61/default.aspx.

62 Television Advertising Bureau (available at: http://www.tvb.org/planning_buying/184839/4729/72555). These markets include almost all U.S. households (115,905,450) (*see* http://www.tvb.org/media/file/Nielsen_2010_2011_DMA_RANKS.pdf).

63 *Comcast v. FCC,* 579 F.3d 1, 7 (D.C. Cir. 2009).

64 *Id.* at 8.

65 *Id.*

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> point is due largely to the success of the Cable Act of 1992 [that] gave emerging satellite competitors and others access to cable programming, making competition viable. I am encouraged by the progress that direct broadcast satellite companies and wireless cable companies are making in signing up customers and competing against incumbent cable operators.[66]

Thus, Congress, in the 1996 Act, determined that the multichannel video market was "fully competitive" in the sense that market forces were sufficiently strong to eliminate the need for government regulation for cable programming services.[67] Representative Markey's statement does include words like "emerging" and "progress," suggesting that the deregulation was based on the belief that competitive alternatives would succeed going forward; they plainly have. From 1995 to 2006, for example, direct broadband satellite services grew from 1.7 million to 28 million subscriptions, the latter representing about 29 percent of all U.S. MVPD subscribers.[68] More recent evidence indicates that DBS players control a 33% market share and "four out of the top 10 MVPDs are not cable companies and represent 41% of MVPD subscribers."[69]

Based on this evidence and a sensible and well-documented definition of the term "fully competitive," we believe the Commission can make a positive determination that the market for multichannel video programming is "fully competitive" for purposes of Section 629(e). In so doing, the first-prong of the sunset provisions of Section 629(e) is satisfied.

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66 CONFERENCE REPORT ON S. 652, CONGRESSIONAL RECORD—HOUSE (February 1, 1996) at p. H 1169 (available at: http://www.gpo.gov/fdsys/pkg/CREC-1996-02-01/pdf/CREC-1996-02-01-pt1-PgH1145-6.pdf).

67 Of course, Congress did leave the basic programming tier regulated subject to a subsequent determination that a particular franchise was subject to "effective competition." Notably, the FCC has granted petitions of effective competition in over 7,000 cable systems, including many large cable systems, *see In the Matter of Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Rates for Basic Service, Cable Programming Service, and Equipment,* DA 11-284, REPORT ON CABLE INDUSTRY PRICES, 26 FCC Rcd. 1769 (rel. February 14, 2011) at n.10, and franchising authorities have chosen not to regulate basic tier rates in numerous other systems, providing further evidence of the competitive nature of the MVPD market across the country.

68 *In re Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming,* SECOND ANNUAL REPORT, FCC 95-491, 11 FCC Rcd. 2060 at ¶ 49 (rel. Dec. 11, 1995); *In re Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming,* THIRTEENTH ANNUAL REPORT, FCC 07-206, 24 FCC Rcd. 542 at ¶ 75 (rel. Jan. 16, 2009)(available at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-206A1.pdf).

69 *Comcast v. FCC, supra* n. 63; *National Broadband Plan, supra* n. 3 at 51.

D. *The Market for Converter Boxes and Interactive Equipment is "Fully Competitive" for Purposes of 629(e)(2)*

Again, under our standard, the market for converter boxes, and interactive communications equipment, used in conjunction with that service is *fully competitive* for purposes of Section 629(e) if there are market forces sufficiently strong to eliminate the need for government regulation. As with the first prong of Section 629(e), a finding by the FCC that the equipment market is "fully competitive" presents no difficulty. Recall that the 1998 *Navigation Devices Order* defined the equipment market to include any navigation devices subject to Section 629. Marketplace evidence reveals that there are a large number of sellers of converter equipment in such a market. Suppliers of set-top box equipment include, but are not limited to, Pace, Motorola, Cisco, Evolution Broadband, Samsung, Zoom, Panasonic, ARRIS, and Tivo.[70] Further, there has never been, nor is there any proposal for, regulation of the equipment manufacturing industry. While it is true that Motorola and Cisco held a sizeable share of the set-top box market, emerging competition is substantially impacting sales by these firms.[71] (Even if the two companies split the entire market, their rivalry would satisfy the 50-15 standard of 623(l)(1).) Evidence of hit-and-run entry in the past suggests that the market share success of these companies may be largely due to superior efficiency and technology rather than any anticompetitive actions.[72]

Recent evidence indicates that industry concentration in the navigation devices market is falling rapidly. (Note that concentration does not directly map to competitiveness.) A market survey by Infonetics Research, released in March 2011, provides market share data for the

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[70] *See* Comments of the National Cable & Telecommunications Association, MB Docket No. 10-91; CS Docket No. 97-80; PP Docket No. 00- 67 (July 13, 2010) at p. ii ("Cable operators now purchase set-top boxes from a growing number of consumer electronics manufacturers, including Pace, Motorola, Cisco, Evolution Broadband, Samsung, Panasonic, ARRIS, and TiVo.").

[71] *Quick Take – U.S. Cable: Cisco's Pain is Cable's Gain … the Read Across for Cable Capex*, BERNSTEIN RESEARCH (November 11, 2010); T. Spangler, *Cisco's Cable Sales Get Hammered Set-Top Sales in North America Drop 40% Year-Over-Year*, MULTICHANNEL NEWS (November 11, 2010); J. Pletz, *Motorola Mobility's Cable Set-Top Box Unit Losing Ground,* CRAIN'S CHICAGO BUSINESS (June 6, 2011); J. Baumgartner, *Samsung Boxes Break In at Cablevision*, LIGHT READING CABLE (August 19, 2010) (available at: http://www.lightreading.com/document.asp?doc_id=195923&site=lr_cable&f_src=lightreading_gnews); *National Broadband Plan, supra* n. 3, at p. 50.

[72] Baumgartner, *id*. Hit-and-run entry requires low sunk entry costs, which permits firms to enter a market in pursuit of profits, and exit if profits turn out to be unavailable. The history of hit-and-run entry in the set-top market, by firms like Sony, could be used to suggest the converter box market is contestable, implying competitive outcomes even when only one or a few firms participate in the market. W.J. Baumol, J.C. Panzar & R.D. Willig, CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE (1982).

navigation devices market for the years 2008, 2009 and 2010.[73] This data is summarized in Table 1, using the market share data from this report to compute an HHI for the industry. In 2008, the data indicate something much like duopoly, where the HHI would be 5,000 if the firms were equal sized. In 2010, alternately, the HHI had fallen significantly, to the equivalent of just over five firms. Under the 2010 Merger Guidelines, the HHI is just above the threshold (1,500) for an "unconcentrated market."[74] A continued decline in industry concentration is expected, as cable operators (and consumers) are further diversifying their equipment supplier base. For example, TiVo has agreements to provide joint services with Comcast and DirecTV, and its market share is expected to rise as a result.[75] In any case, the set-top market in the recent past, much less in the now distant past when the 1996 Act was written, is not the same market as today. The potential benefits from Section 629 are, consequently, much smaller, though there is little reason to suspect the costs of mandated technology standards have fallen.

Table 1. Concentration in the Navigation Devices Market

	2008	2009	2010
Revenue-based HHI	5,667	2,020	1,913
Unit-based HHI	5,475	2,417	1,849

Source: Infonetics Research (2011).

Also, some cable operators are finding ways to deliver video without using a set-top box, utilizing software-based security and delivering content from the "cloud" to a variety of devices.[76] Cablevision, for example, claims to have hundreds of thousands of customers using its network DVR service, which eliminates an operator-supplied DVR by moving the recording

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[73] *Cable, Satellite, IPTV, and OTT Set-Top Boxes and Subscribers, Quarterly Worldwide and Regional Market Share, Size and Forecasts, 4Q10*, INFONETICS RESEARCH (March 16, 2011) (available at: http://www.infonetics.com).

[74] HORIZONTAL MERGER GUIDELINES (August 19, 2010) (available at: http://www.justice.gov/atr/public/guidelines/hmg-2010.html).

[75] *TiVo and Comcast Team Up to Offer the First Retail Cable Set-Top With DVR That Delivers Linear TV, Broadband Content and Xfinity On Demand Library All From One Box*, Press Release, Comcast and Tivo (May 09, 2011) (available at: http://www.pr-inside.com/tivo-and-comcast-team-up-to-r2581272.htm); *DIRECTV and TiVo to Launch New HD DIRECTV DVR with TiVo Service*, Press Release, DirecTV (available at: http://investor.directv.com/releasedetail.cfm?ReleaseID=331835); D. Reisenger, *DirecTV TiVo DVR delayed to 2011*, CNET NEWS (October 4, 2010) (available at: http://news.cnet.com/8301-13506_3-20018468-17.html).

[76] *See, e.g.*, J. Barthold, *Is the Set-Top Box on its Way Out? Cable Executives Sound Off*, FIERCECABLE (November 23, 2010) (available at: http://www.fiercecable.com/special-reports/set-top-box-its-way-out-cable-executives-sound); S. Donohue, *The Disappearing Set-Top*, LIGHT READING CABLE (April 26, 2011) (available at: http://www.lightreading.com/document.asp?doc_id=207138&site=lr_cable&f_src=lightreading_gnews).

capability into the cloud.[77] Similarly, Comcast's Xfinity app for iPad allows users to both change channels and to stream TV shows and movies from Comcast's On-Demand catalog directly to their iPad.[78] The growing number of over-the-top Internet-video equipment, such as Roku, Boxee, Western Digital, Logitech, GoogleTV, and Apple TV, among others, may soon be a competitor of, rather than a complement to, traditional video services that require a set-top box.[79] For example, one over-the-top video vendor states that 30% of its customers cancel cable service after using its service.[80] So, while many MVPDs are using over-the-top video as a complement to their services and Internet-based video is not ideal for all types of content, over-the-top services may serve as a potential competitor to traditional video services for some customers. Since the traditional set-top box is a strong complement to cable service (i.e., the box has no independent value), to the extent over-the-top video services add to the competition in the MVPD market, they likewise add to the competition in the set-top box market.[81]

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77 R. Lawler *Why Time Warner Cable Is Cutting Its Own Cord,* GIGAOM (January 7, 2011) (available at: http://gigaom.com/video/time-warner-cable-tvs-tablets); G. McMillan, *Cablevision Launches iPad App Offering 300 Channels of Live TV,* TIME TECHLAND (April 4, 2011) (available at: http://techland.time.com/2011/04/04/cablevision-launches-ipad-app-offering-300-channels-of-live-tv); L. Whitney, *Time Warner launches TV-viewing app for iPad,* CNET NEWS (March 15, 2011) (available at: http://news.cnet.com/8301-1023_3-20043265-93.html).

78 APPSCOUT, *Comcast Updates Xfinity App for iPhone, Adds On-Demand Streaming* (May 25, 2011) (available at: http://www.appscout.com/2011/05/comcast_updates_xfinity_app_fo.php); *see also* K. Tofel, *Qualcomm's Wi-Fi Chip Could Turn Handhelds into a TV Set-Top Box,* GIGAOM (June 1, 2011) (available at: http://gigaom.com/mobile/qualcomms-wi-fi-chip-could-turn-handhelds-into-a-tv-set-top-box).

79 *See, e.g.*, S. Smith, *Over –The-Top! 488 Million Households to be OTT-Capable by 2016,* VIDBLOG (June 3, 2011) (http://www.mediapost.com/?fa=Articles.showArticle&art_aid=151615); J. Wilcox, Samsung: *Cable Without Set-Top Boxes Coming Via TV Apps?* (January 11, 2011) (available at: http://news.consumerreports.org/electronics/2011/01/samsung-cable-settop-box-tv-apps.html?EXTKEY=I91CONL&CMP=OTC-ConsumeristRSS); B. Drawbaugh, *Could This be the Year We Get to Ditch the Cable Box?*, ENGADGET (January 9, 2011) (available at: http://www.engadget.com/2011/01/09/could-this-be-the-year-we-get-to-ditch-the-cable-box); T. Radu, *Millions Ditch Cable for Network and Antennas*, TG DAILY (April 11, 2011) (available at: http://www.tgdaily.com/business-and-law-features/55291-millions-ditch-cable-for-netflix-and-antennas).

80 R. Lawler, *30% of PlayOn Users Cut the Cord,* GIGAOM (October 15, 2010) (available at: http://gigaom.com/video/30-of-playon-users-cut-the-cord); J. Orlin, *Comcast Reports Drop in Cable Subscribers; Blames Economy*, TECHCRUNCH (October 27, 2010) (available at: http://techcrunch.com/2010/10/27/comcast-reports-drop-in-cable-subscribers-blames-economy/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+Techcrunch+%28TechCrunch%29).

81 For a further discussion on the economics of complementarity of service and equipment, *see* G.S. Ford, T.M. Koutsky and L.J. Spiwak, *Consumers and Wireless Carterfone: An Economic Perspective*, PHOENIX CENTER POLICY BULLETIN NO. 21 (September 2008) (available at: http://www.phoenix-center.org/PolicyBulletin/PCPB21Final.pdf).

In our interpretation of Section 629(e)(2), we do not require consumers to be direct participants in the equipment market, and for obvious reasons. While Section 629(a) does refer to "commercially availab[ility] … to consumers," Section 629(e)(2) makes no reference "to consumers," but addresses only competition generally. Such differences in statutory language cannot be ignored. There is no linkage of "fully competitive" to the particular requirements in Section 629(a), and there is no mention of consumers in 629(e)(2). Indeed, Congress expressed concern in Section 629(e)(3) that the provisions of Section 629(a) may impede competition, implying that the full implementation of 629(a) may be in conflict with the requirements of 629(e)(1) and (2).

Further, had Congress intended the "to consumers" element to apply in the sunset provision, it could have drafted the Act so that sunset was possible only after the full implementation of Section 629(a) as it did elsewhere in the Act. Consider, for example, the language in Section 10 of the Act governing regulatory forbearance.[82] Congress specifically limited the FCC's ability to forbear from certain parts of Section 251 and Section 271 of the 1996 Act, mandating that forbearance was not permitted until those requirements had been "fully implemented."[83] Section 629(e), however, contains no mandate for full implementation. In fact, it would not be possible to do so given Section 629(e)(3), which implies that full implementation may impede competition. If the MVPD market is competitive and the equipment market is competitive, then regulation is probably more harmful than helpful, even if consumers are unable to purchase set-top equipment directly from manufacturers. The statute reflects that intuition.

E. *Sunsetting 629 Would Both Promote Competition and the Public Interest*

The third leg of the sunset provisions requires that reduced regulation of the video marketplace "promote competition" and be in the "public interest." In our view, satisfying these standards is not a problem. For example, innovation in the set-top box, if important to consumers, is one means by which firms can compete. Commoditizing the technology, or hindering the freedom to innovate, may alter the nature—and impede the intensity—of competition. The point was not lost on Congress. Section 629(c) permits the agency to waive the regulatory requirements of Section 629(a),

> upon an appropriate showing by a provider of multichannel video programming and other services offered over multichannel video programming systems, or an

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82 Communications Act Section 10, 47 U.S.C. § 160.

83 Communications Act Section 10(d).

> equipment provider, that such waiver is necessary to assist the development or introduction of a new or improved multichannel video programming or other service offered over multichannel video programming systems, technology, or products.

Thus, Congress recognized that under certain conditions, setting aside the rules may be "necessary to assist the development or introduction of a new or improved [services and technologies]." Eliminating regulation that deters innovation clearly serves the public interest.[84]

Also, different delivery technologies may face different compliance costs with the regulation. If so, then relative prices may change, altering the competitive dynamic of the MVPD market. Moreover, Section 629(a) imposes a price regulation on *all* MVPDs (i.e., not just cable companies) with regard to the set-top box (i.e., no subsidies), and the impact of this price regulation may differ across firms and technology types, also altering the competitive dynamic.

But there is more: As noted above, even the Commission has conceded that its implementation of 629 has been a costly disaster, forcing operators and consumers to shoulder more than one billion dollars in costs without any discernable benefits. The agency also acknowledged that its rules would lead to increases in the prices for equipment, burdening consumers with the agency's experimentation.[85] Furthermore, in FCC waivers of the rules, the agency has explicitly observed that relief from the rules render "substantial public interest benefits by significantly reducing cost."[86] By extending the regulatory mandate to DBS providers, the cost of regulatory compliance rise.

If the FCC proceeds quickly to sunset Section 629, then another sizable benefit that accrues to the public interest is the avoidance of stranded research, deployment, marketing, and other costs incurred to bring AllVid to fruition. Similarly, as few customers have adopted CableCard

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84 *In re Evolution Broadband, LLC's Request For Waiver of Section 76.1204(a)(1) of the Commission's Rules, Implementation of Section 304 of the Telecommunications Act of 1996 Commercial Availability of Navigation Devices*, MEMORANDUM OPINION AND ORDER, 24 FCC Rcd. 7890 (June 1, 2009); *In re Cablevision Systems Corporation's Request For Waiver of Section 76.1204(a)(1) of the Commission's Rules, Implementation of Section 304 of the Telecommunications Act of 1996 Commercial Availability of Navigation Devices*, MEMORANDUM OPINION AND ORDER, 22 FCC Rcd. 220 (January 10, 2007); *In re Consolidated Requests For Waiver of Section 76.1204(A)(1) of the Commission's Rules, Implementation of Section 304 of the Telecommunications Act of 1996 Commercial Availability of Navigation Devices*, MEMORANDUM OPINION AND ORDER, 22 FCC Rcd. 11780 (June 29, 2007); *In re Guam Cablevision, LLC, Request for Waiver of Section 76.1204(a)(1) of the Commission's Rules, Implementation of Section 304 of the Telecommunications Act of 1996 Commercial Availability of Navigation Devices*, MEMORANDUM OPINION AND ORDER, 22 FCC Rcd. 11747 (June 29, 2007).

85 *See supra* n. 8 and citations therein.

86 *AllVid NOI*, *supra* n. 2 at ¶ 9.

and manufacturers have largely ceased investing in the technology, a sunset of Section 629 today minimizes stranded costs and affects few, if any, consumers. Alternately, if the agency makes another go at Section 629, it forces MVPDs to incur significant costs and also encourages manufacturers and customers to make financial commitments to the Commission's chosen standards. All of these commitments are technology-specific, and wasted if the agency's scheme falters, which it is bound to do given the economics of the issue and the dynamic nature of the video industry at present.[87] Yet, if manufacturers and consumers expect failure, based on the historical evidence, then both may proceed cautiously with their commitments to CableCARD and AllVid. If so, then the expected benefits of the regulatory scheme will be reduced, but the implementation costs by the MVPD industry will not, since MVPDs must incur such costs for their own equipment and on behalf of their customers. Such hedging makes for an unfavorable cost-benefit analysis for Section 629.

Last, and certainly not least, putting an end to the Section 629 debacle is entirely consistent with the stated purpose of the 1996 Act ("to reduce regulation")[88] and President Obama's recent Executive Order that called upon federal agencies to conduct a cost-benefit review of existing federal regulations[89] and eliminate those "that have outlived their usefulness."[90] While the FCC, as an "independent" agency, is exempt from complying with this directive, Chairman Julius Genachowski has endorsed both the letter and the spirit of the President's directive wholeheartedly.[91] Surely, if ever there was a candidate to show that this Commission is truly committed to removing outmoded regulations, then ending the Commission's tortured fourteen year experiment with Section 629 is it.

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87 *See generally, Wobbling Back to the Fire*, *supra* n. 7.

88 JOINT EXPLANATORY STATEMENT, *supra* n. 20.

89 *Improving Regulation and Regulatory Review,* EXECUTIVE ORDER NO. 13563 (January 18, 2011) (available at: http://www.whitehouse.gov/the-press-office/2011/01/18/improving-regulation-and-regulatory-review-executive-order); *Regulatory Planning and Review,* EXECUTIVE ORDER NO. 12866 (September 30, 1993); 44 U.S.C. § 3502(5).

90 B. Obama, *Toward a 21st-Century Regulatory System*, WALL STREET JOURNAL (January 18, 2011) (available at: http://online.wsj.com/article/SB10001424052748703396604576088272112103698.html); Korte, *id*; *see also* E. Williamson, *Obama Launches Rule Review, Pledging to Spur Jobs, Growth*, WALL STREET JOURNAL (Jan. 18, 2011) (available at: http://online.wsj.com/article/SB10001424052748703396604576088634252904032.html).

91 Prepared Remarks of Chairman Julius Genachowski, Federal Communications Commission Broadband Acceleration Conference, Washington, D.C. (February 9, 2011) (available at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-304571A1.pdf).

III. Conclusion

Like it or not, until the underlying economic reality changes, the FCC's anticipated aggressive approach to Section 629 is likely—as FCC Commissioner Robert McDowell notes—to keep the agency in "the Valley of Unattained Goals."[92] For this reason, we have presented in this BULLETIN plausible legal, economic, and evidentiary arguments on how the Commission can justify the sunset of Section 629, thereby purging from the policy debate the view that billions should be wasted on a futile task simply "because Congress told us to."[93] While we understand that the Commission has extended significant political capital in raising the AllVid issue both in the *National Broadband Plan* and in a subsequent *Notice of Inquiry*, initiating a formal *Notice of Proposed Rulemaking* will set the agency on a course that, once started, will be difficult to reverse and could result in another CableCARD-like failure. Present market conditions in the multichannel video market, while not perfectly competitive in the textbook sense, are such that regulatory efforts are unlikely to create more benefits than costs. As a result, Section 629 has "outlived its usefulness" and should be put to bed.

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92 *Third Report, supra* n. 3, Statement of Commissioner Robert McDowell.

93 *Id.*