Before the
Federal Communications Commission
Washington, D.C. 20554

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In the Matter of	)	
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Basic Service Tier Encryption	)	MB Docket No. 11-169
	)	
Compatibility Between Cable Systems and Consumer Electronics Equipment	)	PP Docket No. 00-67
	)	

NOTICE OF PROPOSED RULEMAKING

Adopted: October 13, 2011 **Released: October 14, 2011**

Comment Date: [30 days after publication in the Federal Register]
Reply Comment Date: [45 days after publication in the Federal Register]

By the Commission:

I. INTRODUCTION

1. With this Notice of Proposed Rulemaking ("NPRM"), we seek comment on whether to retain the basic service tier encryption prohibition for all-digital cable systems. As discussed below, we tentatively conclude that allowing cable operators to encrypt the basic service tier in all-digital systems will not substantially affect compatibility between cable service and consumer electronics equipment for most subscribers. At the same time, however, we recognize that some consumers subscribe only to a cable operator's digital basic service tier and currently are able to do so without using a set-top box or other equipment. Similarly, there are consumers that may have a set-top box on a primary television but access the unencrypted digital basic service tier on second or third televisions in their home without using a set-top box or other equipment. Although we expect the number of subscribers in these situations to be relatively small, these consumers may be affected by lifting the encryption prohibition for all-digital cable systems. Accordingly, we tentatively conclude that, any operators of all-digital cable systems that choose to encrypt the basic service tier must comply with certain consumer protection measures for a limited period of time in order to minimize any potential subscriber disruption.

II. BACKGROUND

2. In the Cable Television Consumer Protection and Competition Act of 1992 ("1992 Cable Act"), Congress recognized that compatibility problems between cable service and consumer electronics equipment were limiting and/or precluding the operation of premium features of consumer equipment and were affecting the ability of consumer equipment to receive cable programming. Section 624A of the Act[1] was added by Section 17 of the 1992 Cable Act to address this issue. Specifically, Section 624A requires the Commission to issue regulations to assure compatibility between consumer electronics equipment and cable systems.[2] In 1994, the Commission implemented the requirements of Section

[1] 47 U.S.C. § 544a.

[2] *Id.*

624A.[3] As part of that implementation, the Commission added Section 76.630(a) to its rules. Section 76.630(a) prohibits cable operators from scrambling or encrypting signals carried on the basic tier of service. The Commission determined that this rule would significantly advance compatibility by ensuring that all subscribers would be able to receive basic tier signals "in the clear" and that basic-only subscribers with cable-ready televisions would not need set-top boxes.[4] The Commission concluded that "[t]his rule also will have minimal impact on the cable industry in view of the fact that most cable systems now generally do not scramble basic tier signals."[5]

3. Subsequent to the Commission's adoption of the encryption ban, cable operators began to upgrade their systems to offer digital cable service.[6] More recently, cable operators' transition to more efficient all-digital systems has freed up spectrum to offer new or improved products and services like higher-speed Internet access and high definition programming.[7] As a result of this digital transition, most cable subscribers now have at least one cable set-top box or CableCARD device in their homes.[8] As cable operators began to transition programming on their cable programming service tier ("CPST")[9] to digital, many program carriage agreements required cable operators to encrypt that programming as a condition of carriage.[10] Encryption refers to the method that cable operators use to make sure that cable service is available only to subscribers who have paid for service. Because encryption serves such an important purpose, encryption of digital cable service has become more sophisticated than analog scrambling techniques.[11] Encryption methods did not used to be standard across all cable systems,

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[3] *See Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992: Compatibility between Cable Systems and Consumer Electronics Equipment*, 9 FCC Rcd 1981, 1990-92, ¶¶ 49-59 (1994) ("*Compatibility Order*").

[4] *Id.*

[5] *Id.* at 1991, ¶ 55.

[6] *See generally* http://www.ncta.com/About/About/HistoryofCableTelevision.aspx.

[7] *Bend Cable Communications, LLC, Request for Waiver of Section 76.1204(a)(1)*, 22 FCC Rcd 209, 217-8, ¶¶ 24-25 (MB 2007); Vince Horiuchi, *Comcast bridging TV gap with free digital boxes: New boxes for some subscribers will help free bandwidth*, SALT LAKE TRIBUNE, March 1, 2010.

[8] CableCARD devices are devices that can access digital cable service when paired with a CableCARD. *See Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, 18 FCC Rcd 20885 (2003). *See also infra*, note 14 explaining the CableCARD standard. Some CableCARD devices, such as the TiVo digital video recorder, the Ceton InfiniTV 4 tuner for personal computers, and the Arris Moxi digital video recorder, are available for purchase at retail. Others, such as the set-top boxes produced by Motorola Mobility and Cisco, are only available for lease from a cable operator. *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, 25 FCC Rcd 14657 (2010).

[9] The basic service tier includes broadcast stations and public access services, whereas the CPST generally includes other popular non-broadcast programming services. *See TCR Sports Broadcasting Holding, L.L.P. d/b/a Mid-Atlantic Sports Network v. Time Warner Cable Inc.*, 25 FCC Rcd 18099, 18102, ¶ 5.

[10] "Many cable program networks want to require cable operators to encrypt all of their signals, including standard definition digital signals. Doing so would require [a CableCARD or set-top box for use with] every single digital TV set." Letter from Mark Palchick, Counsel to Massillon Cable TV, to Marlene H. Dortch, Secretary, Federal Communications Commission, CSR-7229-Z, CS Docket No. 97-80, at Attachment at 7 (July 31, 2009). *See also* Montgomery County, Maryland Reply, MB Docket No. 10-91, at 9 (filed Aug. 12, 2010) ("The majority of cable operators now encrypt all but their broadcast channels and PEG access channels.").

[11] Cable operators scramble analog systems through the use of negative traps, which block the picture carrier frequency, or positive traps, which add a subcarrier frequency to the cable signal before it enters a subscriber's

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however.[12] In 2003, therefore, the Commission adopted the CableCARD standard to address this incompatibility problem.[13] The CableCARD, which subscribers must lease from their cable provider either as a part of a leased set-top box or separately for use in a compatible retail television or set-top box,[14] decrypts the cable services that the cable operator encrypts. At present, approximately 77 percent of cable subscribers have at least one digital cable set-top box or retail CableCARD device in their home.[15]

4. The fact that most subscribers have a cable set-top box or retail CableCARD device limits the impact of encryption of the basic service tier in all-digital systems on cable subscribers.[16] Most television sets, consumer electronics devices, and leased set-top boxes have included QAM tuners since at least 2007,[17] meaning that those devices are capable of tuning unencrypted digital cable service. As

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home. The blocking or addition of a signal muddles the original signal to the point that receivers (like television sets) can not display a viewable picture. WALTER CICIORA ET AL, MODERN CABLE TELEVISION TECHNOLOGY 824-6 (2d ed. Morgan Kaufmann Publishers 2004). When subscribers subscribe to the blocked services, cable operators remove the negative traps or offer set-top boxes that block the added subcarrier frequency of positive traps. These techniques work well, but are not particularly complex – negative traps are analogous to putting a blindfold on someone so that person cannot see a message, whereas positive traps are analogous to shining a bright light in the someone's eyes so that person cannot see a message. *Id.* Complex digital encryption technology is more akin to using a code to prevent a person from deciphering a message's true meaning, regardless of whether that person is able to see the message that the sender transmits. *Id.* at 875-892.

[12] In the late 1990s, the Commission recognized that this diversity in encryption techniques could present a barrier to compatibility between retail devices and cable services because consumer electronics manufacturers could not build complex, system-specific decryption technology into their devices, and cable operators did not wish to entrust consumer electronics manufacturers with the complex encryption algorithms used to protect cable content. *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, Notice of Proposed Rulemaking, 12 FCC Rcd 5639, 5653-7, ¶¶ 30-36 (1997).

[13] *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, 18 FCC Rcd 20885 (2003). The CableCARD standard separates the encryption function from all other functions of a television or set-top box; the CableCARD is designed to decrypt the system-specific encryption and re-encrypt the signal into the nationally supported dynamic feedback arrangement scrambling technique (DFAST). *Id.* This permits consumer electronics device manufacturers to build nationally portable devices that are compatible with cable systems nationwide. *Id.*

[14] Retail CableCARD devices (such as set-top boxes, computer peripherals, and television sets) come without CableCARDs installed; subscribers must lease the CableCARD from the cable operator and install it in the device. *See id.*; *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, 25 FCC Rcd 14657 (2010). Leased set-top boxes usually come with the CableCARD preinstalled by the manufacturer. *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, 25 FCC Rcd 14657, 14660-1, ¶ 5 (2010).

[15] *Multichannel video segment suffers customer losses in Q2*, BROADBAND TECHNOLOGY (SNL Kagan, Charlottesville, VA), Aug. 22, 2011, at 2.

[16] As discussed *infra*, footnote 20, a limited number of subscribers in all-digital homes may use second or third television sets to access unencrypted digital basic service tier service without set-top boxes or CableCARDs, but we expect that the number of subscribers in this category may be relatively small.

[17] "QAM" refers to quadrature amplitude modulation, the modulation technique that cable operators use to transmit data using traditional 6 MHz RF channels. CICIORA ET AL, *supra* note 11, at 12 (2d ed. Morgan Kaufmann Publishers 2004). This technique is analogous to the 8-VSB modulation technique that over-the-air broadcast television uses to transmit data. *Id.* at 137-81. Section 15.117(i) of the Commission's rules requires all television reception devices shipped in interstate commerce to include digital television (DTV) tuners. 47 C.F.R. § 15.117(i) (setting forth an implementation schedule for devices to include DTV tuners and stating that as of March 1, 2007 all

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stated above, however, most cable operators who have transitioned to all-digital service encrypt the entire CPST. Therefore, many cable subscribers currently use CableCARDs (either in a retail device or leased set-top box) to decrypt their cable service.[18] The remainder of digital cable subscribers use either (i) leased set-top boxes with integrated security (offered under waivers of the separated security requirement[19] or originally deployed before the requirement became effective) to decrypt cable service, or (ii) television sets or devices with QAM tuners, but without CableCARDs, to receive any remaining unencrypted cable signals (typically limited to the basic service tier). Encryption of the basic service tier in all-digital systems would affect this second group, *i.e.*, the digital cable subscribers who use television sets or devices with QAM tuners, but without CableCARDs. We do not know how many subscribers fall into this group, but based on the Cablevision Report discussed below, we expect it to be small.[20]

5. In the past, the Commission has waived the basic service tier encryption prohibition on a demonstration of extraordinary theft of service.[21] Theft of service occurs when unauthorized users physically connect their outlets to the cable plant;[22] in other words, people would climb poles and connect the cable operator's coaxial cable to homes that do not subscribe to cable service. Recently, the Commission has received several requests for waiver of the rule prohibiting encryption of the basic service tier based on the argument that the rule imposes more burdens than benefits as cable operators

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television reception devices shipped in interstate commerce must include DTV tuners). Many devices that include digital tuners can receive both QAM signals transmitted by cable operators and 8-VSB signals transmitted by broadcast stations. *See The FCC's Office of Engineering and Technology Releases Report on Tests of Prototype TV White Space Devices*, 23 FCC Rcd 16007, 16046 (2008).

[18] *Compare* Letter from Neal M. Goldberg, Vice President and General Counsel, National Cable and Telecommunications Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, CS Docket No. 97-80, at 1 (June 30, 2011) *with Multichannel video segment suffers customer losses in Q2*, BROADBAND TECHNOLOGY (SNL Kagan, Charlottesville, VA), Aug. 22, 2011, at 2 (reporting deployment of 29.9 million CableCARDs by the ten largest cable operators and 45.4 total digital cable subscribers nationwide, respectively).

[19] The separated security requirement is two-fold: (i) cable operators must provide a separated security element (the CableCARD) to a subscriber upon request, and (ii) cable operators must rely on the CableCARD in the devices that they deploy to subscribers. 47 C.F.R. § 76.1204(a)(1). Some cable operators have received waivers of the second requirement that they rely on CableCARDs in the devices that they deploy to consumers. *See, e.g., Consolidated Requests for Waiver of Section 76.1204(a)(1) of the Commission's Rules*, 22 FCC Rcd 11780 (MB 2007).

[20] *See infra*, ¶ 8. *Compare* Cablevision Reply, MB Docket No. 08-168, at 1-2 (filed Nov. 16, 2009) *with* Letter from Michael E. Olsen, Senior Vice President, Legal Regulatory and Legislative Affairs, Cablevision Systems Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 09-168 (Aug. 11, 2011) (reporting, respectively, that Cablevision has more than 700,000 subscribers in New York City and that it deployed 739 free set-top boxes to basic service tier subscribers as a condition of its basic service tier encryption waiver; this represents one tenth of one percent of Cablevision's subscribers in New York City). We understand, anecdotally, that these devices often are non-primary devices in households, including guest room television sets and television sets in kitchens.

[21] *See Liberty Cablevision of Puerto Rico, Inc. Petition for Waiver of Section 76.630(a) Basic Tier Scrambling*, 15 FCC Rcd 15064 (CSB 2000); *Centennial Puerto Rico Cable TV Corp. Petition for Waiver of Section 76.630(a) Basic Tier Scrambling*, 18 FCC Rcd. 7736 (MB 2003).

[22] *See Liberty Cablevision of Puerto Rico, Inc. Petition for Waiver of Section 76.630(a) Basic Tier Scrambling*, 15 FCC Rcd 15064, 15065-6, ¶¶ 5-6 (MB 2000). Cable operators also aggressively combat the theft problem by educating and penalizing offenders, pursuing civil actions, and assisting law enforcement officials in criminal actions. *Id.* at 15065, ¶ 3.

transition to all-digital systems.[23] The petitioners argue that there are very few people who subscribe only to the basic service tier in all-digital systems and therefore the overwhelming majority of subscribers to all-digital systems already have a set-top box or CableCARD-equipped retail device and therefore would be unaffected by encryption of the basic service tier.[24] Furthermore, they contend, encrypting the basic service tier in an all-digital system will eliminate the need for many service appointments because it will allow cable operators to enable and disable cable service remotely by activating and deactivating the encryption capability of set-top boxes and CableCARDs from the headend.[25] In order to remotely activate and deactivate service, cable operators must leave every home connected to the cable plant rather than manually disconnect the cable that runs to a home, which is how many cable operators disconnect service today. If the cable operator is allowed to encrypt every signal, the operator can keep every home connected to the cable plant regardless of whether the home subscribes to cable service. The operator can ensure that only paid subscribers are able to access the service by authorizing and deauthorizing CableCARDs as people subscribe or cancel cable service.[26]

6. In waiver proceedings, certain commenters have asserted that while encryption of all service tiers has its benefits, it also imposes some burdens on consumers and device manufacturers. For example, some commenters explained that they own or manufacture devices like personal computer cable tuner cards that cable subscribers use to view or record unencrypted programming with their computers.[27] These commenters expressed concern that those devices do not have the ability to decrypt cable signals and therefore could not display encrypted cable programming.[28] These commenters asserted that they purchased or manufactured these devices based on the expectation that unencrypted basic service tier QAM signals would be available from cable operators, and that encryption of the basic service tier would make the devices useless.[29] In addition, some commenters objected to the impact that encryption of the

[23] *See, e.g.*, Inter Mountain Cable Inc.'s Request for Waiver of Section 76.630(a) of the Commission's Rules, CSR-8483-Z (filed April 13, 2011); RCN Telecom Services, Inc.'s, Request for Waiver of Section 76.630(a) of the Commission's Rules, CSR-8525-Z (filed Aug. 12, 2011) ("*RCN Request*"); Cablevision Systems Corporation's Request for Waiver of Section 76.630(a) of the Commission's Rules, MB Docket No. 09-168 (filed Aug. 19, 2009) ("*Cablevision Request*").

[24] *See, e.g.*, *RCN Request* at 1-2.

[25] *Id.* at 6-7.

[26] Without the CableCARD, which is necessary to decrypt the service, a device cannot decrypt and display the signal it receives. Therefore, cable operators can send cable signals into every home passed but non-subscribers will not be able to access the service. While cable operators cannot activate service instantaneously – subscribers will need to obtain CableCARDs or set-top boxes from their providers to receive service – delivery of CableCARDs or set-top boxes to and from subscribers is much easier from a logistical perspective than scheduling an appointment with consumers to connect or disconnect a specific home. *See* Cablevision Request at 4 ("Customers could pick up a digital set-top box at a walk-in center or have it shipped directly to their home, plug in the digital box for any level of service, and enjoy it immediately, without waiting for a service appointment to install or reactivate a drop."). Likewise, beginning November 1, 2011, our rules will require all cable operators to allow self-installation of CableCARDs in devices provided that the device manufacturer or vendor includes appropriate installation instructions, and a manned toll-free telephone number to answer installation questions. 47 C.F.R. § 76.1205(b)(1).

[27] *See, e.g.*, CEA Comments, MB Docket No. 09-168, at 1-3 (filed Oct. 22, 2009); EFF Reply, MB Docket No. 09-168, at 2 (filed Nov. 7, 2009); Elgato Comments, MB Docket No. 09-168, at 2 (filed Oct. 15, 2009); Vincent E. Fasano Comments, MB Docket No. 09-168 (filed Oct. 5, 2009); Michael Mahan Comments, MB Docket No. 09-168 (filed Oct. 2, 2009).

[28] *Id.*

[29] *Id.* While television sets with clear-QAM tuners can access encrypted high-definition cable service through the use of a leased set-top box connected to the television with an HDMI cable, many of these computer peripherals

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basic service tier would have on televisions with clear-QAM tuners that currently are attached to the cable network directly without a set-top box.[30] Encryption of the basic service tier would require those subscribers to lease a set-top box to access basic service tier channels on those television sets.

7. In January 2010, the Media Bureau granted a conditional waiver of the rule that prohibits encryption of the basic service tier to Cablevision with respect to Cablevision's New York City systems, which are all-digital.[31] The Bureau based its decision on the fact that encryption of the basic service tier on Cablevision's all-digital systems would allow Cablevision to enable and disable cable service remotely.[32] The Bureau also found that remote activation and deactivation of cable service would "reduce[] costs for Cablevision, improve[] customer service, and reduce[] fuel consumption and CO_2 emissions."[33] Remote activation and deactivation, the Bureau concluded, would reduce installation costs for Cablevision's subscribers and also benefit these subscribers by reducing the number of necessary service calls, as compared to unencrypted cable systems.[34] The Bureau reasoned that Cablevision sufficiently addressed the problem of incompatibility with consumer electronics "by providing basic-only subscribers with set-top boxes or CableCARDs without charge for significant periods of time."[35] Finally, the Bureau also concluded that the waiver would "provide an experimental benefit that could be valuable in the Commission's further assessment of the utility of the encryption rule,"[36] and therefore required Cablevision to file three reports detailing the effect of encryption on subscribers.[37] Four cable operators have filed similar petitions for waiver with the Commission's Media Bureau since the release of the

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have only coaxial inputs and therefore cannot access any encrypted high-definition service. *See* Joseph Fowble Comments, MB Docket No. 09-168, at 1 (filed Oct. 21, 2009).

[30] As noted *supra* in note 20, we understand, anecdotally, that these television sets often are non-primary television sets.

[31] *Cablevision Systems Corporation's Request for Waiver of Section 76.630(a) of the Commission's Rules*, 25 FCC Rcd 134 (MB 2010) ("*Cablevision Waiver*").

[32] *Id.* at 139, ¶ 12.

[33] *Id.*

[34] *Id.*

[35] *Id.* As a condition of waiver, the Bureau required Cablevision to offer "(a) current basic-only subscribers up to two set-top boxes or CableCARDs without charge for up to two years, (b) digital subscribers who have an additional television set currently receiving basic-only service one set-top box or CableCARD without charge for one year, and (c) current qualified low-income basic-only subscribers up to two set-top boxes or CableCARDs without charge for five years." *Cablevision Waiver*, 25 FCC Rcd at 136, 139-140 ¶¶ 5, 15.

[36] *Id.* at 140, ¶ 16.

[37] The Bureau required Cablevision to file those reports at the 3, 6 and 12-month intervals from the date on which Cablevision encrypted its basic signals, and stated that the reports must include (i) the number of customer complaints related to the waiver, (ii) the number of set-top boxes and CableCARDs described above that were provided at no charge, (iii) the number of installations provided at no charge, (iv) the impact of the waiver on the reduction in truck rolls, and (v) any further steps that it took in order to effectively manage the encryption process and the impact on its customers. *Id.* Cablevision has filed these reports, and they are discussed in more detail in paragraph 8. *See* Letter from Michael E. Olsen, Senior Vice President, Legal Regulatory and Legislative Affairs, Cablevision Systems Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 09-168 (Oct. 29, 2010); Letter from Michael E. Olsen, Senior Vice President, Legal Regulatory and Legislative Affairs, Cablevision Systems Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 09-168 (Feb. 4, 2011); Letter from Michael E. Olsen, Senior Vice President, Legal Regulatory and Legislative Affairs, Cablevision Systems Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 09-168 (Aug. 11, 2011).

Cablevision Waiver,[38] and we understand that additional cable operators plan to file in the absence of this proceeding.

III. DISCUSSION

8. We initiate this proceeding to determine whether the Commission's basic service tier encryption prohibition, which was adopted over 15 years ago, remains necessary to promote compatibility between digital cable service and consumer electronics equipment in all circumstances.[39] In this regard, we note, as described above, that the video marketplace has changed significantly over this period.[40] Specifically, most cable operators have updated their systems to provide bidirectional, digital signals in addition to analog service, and some cable operators, like RCN and BendBroadband, transmit only digital signals and have eliminated analog service in all of their systems.[41] Other operators, like Cablevision and Comcast, have eliminated analog service on certain systems and plan to eliminate analog service in all systems over the coming years.[42] As discussed above,[43] data from SNL Kagan indicates that over three-quarters of cable subscribers have at least one device in their home that can both demodulate and decrypt digital cable services. Furthermore, because the Commission incorporated the CableCARD standard into our rules in 2003, consumer electronics manufacturers can build digital cable ready devices that can access encrypted cable service without the need for a converter box.[44] Given these marketplace and

[38] Inter Mountain Cable Inc.'s Request for Waiver of Section 76.630(a) of the Commission's Rules, CSR-8483-Z (filed April 13, 2011); *RCN Request*; Coaxial Cable TV's Request for Waiver of Section 76.630(a) of the Commission's Rules, CSR-8334-Z (filed April 13, 2010); Mikrotec CATV LLC's Request for Waiver of Section 76.630(a) of the Commission's Rules, CSR-8528-Z (filed Sept. 7, 2011).

[39] *See Compatibility Order*, 9 FCC Rcd at 1990-92, ¶¶ 49-59; 47 U.S.C. § 544a.

[40] Given this significant transformation, we agree with comments of Public Knowledge and Media Access Project made in the context of Cablevision's request for waiver that the best course is for the Commission to launch a rulemaking proceeding regarding basic service tier encryption rather than developing "policy by waiver." PK & MAP Comments, MB Docket No. 09-168, at 2-3 (filed Oct. 22, 2009); PK & MAP Reply, MB Docket No. 09-168, at 2-4 (filed Nov. 16, 2009).

[41] *See* Sworn Declaration of Amy C. Tykeson, President and CEO, Bend Cable Communications, LLC d/b/a BendBroadband, CS Docket No. 97-80, CSR-7057-Z (filed Dec. 12, 2007); *RCN Request* at 2-3.

[42] *See* Posting of Comcast's former Senior Vice President and General Manager of Video and Entertainment Derek Harrar, to ComcastVoices, http://blog.comcast.com/2009/05/going-all-digital-tons-more-hd-and-a-faster-internet.html (May 1, 2009).

[43] *See supra*, ¶ 3.

[44] These rules allow device manufacturers to build devices that are compatible with encryption schemes used in cable systems nationwide, and encourage compatibility between cable systems and retail cable reception devices. *See generally Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, 18 FCC Rcd 20885 (2003). Digital cable ready devices equipped with CableCARDs can simultaneously receive multiple signals, and allow consumer electronics manufacturers to include "watch one, record another" and picture-in-picture functions in their devices. *See* 47 C.F.R. § 76.1205(b)(2). Furthermore, many of the Commission's CableCARD rules track with the issues Section 624A directs the Commission to address. *Compare* 47 U.S.C. § 544a(c)(2)(A) *with* 47 C.F.R. § 15.123; *Compare* 47 U.S.C. § 544a(c)(2)(B)(i) *with* 47 C.F.R. § 76.1622; *Compare* 47 U.S.C. § 544a(c)(2)(B)(ii) *with* 47 C.F.R. §§ 76.640, 76.1200-76.1205; *Compare* 47 U.S.C. § 544a(c)(2)(C) *with Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, 18 FCC Rcd 20885 (2003) and *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, 25 FCC Rcd 14657 (2010).

regulatory developments, we tentatively conclude that it is appropriate to allow basic service tier encryption for all-digital cable systems, subject to certain measures intended to ameliorate any potential harm to consumers in the short run. Our proposal is informed by the information garnered from Cablevision's first year of implementation under the Bureau's waiver conditions. Specifically, in its recently filed final report, Cablevision stated that basic service tier encryption led to a reduction of 2,763 truck rolls, and predicted that it eventually will perform over 70 percent of all deactivations remotely.[45] In its waiver petition, Cablevision asserted that by reducing service calls it could reduce the environmental harms associated with use of gas-consuming, traffic-causing trucks.[46] Furthermore, Cablevision reports that no subscribers filed complaints regarding encryption of the basic service tier, which suggests that with the appropriate consumer protection measures, encryption of the basic service tier in all-digital systems does not affect subscribers adversely.[47] We believe that this evidence shows that, where cable operators undertake appropriate consumer protection measures, the costs of retaining this rule (*e.g.*, the need to schedule service appointments whenever a consumer subscribes to or cancels cable service as well as the expense and effect of cable operators' trucks on traffic and the environment) outweigh the benefits of retaining it (*e.g.*, ensuring the continued utility of devices with clear-QAM tuners). We seek comment on this tentative conclusion. Specifically, we seek comment on the costs and benefits to subscribers and cable operators associated with the basic service tier encryption rule as it applies to all-digital cable systems. We also invite comment on any environmental costs and benefits associated with the rule. Would elimination of the encryption ban benefit the environment through reduction in the gas consumption and traffic associated with truck rolls, and would those benefits outweigh any countervailing environmental effects, such as energy consumption from additional set-top boxes? To the extent feasible, commenters should quantify in dollars any asserted costs or benefits of the basic service tier encryption prohibition.

9. We propose to allow encryption of the basic service tier only with respect to all-digital systems, as remote activation and deactivation of cable service, and its attendant benefits, are only feasible in all-digital systems.[48] We seek comment on the specific criteria that the Commission should use to determine what constitutes an all-digital cable system. For example, what if a system transmits nearly all of its channels solely in digital, but maintains a single, unencrypted analog channel to inform potential subscribers about how to subscribe to service? We seek comment also about digital cable services that are not QAM-based. Is it appropriate to include IP and other non-QAM digital cable services in the definition of an all-digital cable system for the purposes of the proposed rule revision? We

[45] Letter from Michael E. Olsen, Senior Vice President, Legal Regulatory and Legislative Affairs, Cablevision Systems Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 09-168, at 2-4 (Aug. 11, 2011). Cablevision allows subscribers to choose professional installation and disconnection rather than remote activation and deactivation. Cablevision did not specify how many new subscribers chose to connect service remotely rather than professionally, but indicated that "[w]e expect that as customer expectations and habits change over time and we implement our new operations more broadly, the number of customers requesting professional installation appointments will drop substantially." *Id.* at 2.

[46] *Cablevision Request* at 5.

[47] *Id.* at 2.

[48] As explained more fully in paragraph 3 and footnote 11, analog scrambling is performed through the use of traps, which a cable technician must physically affix or remove from the tap outside of a subscriber's home. Furthermore, unlike the CableCARD standard for digital systems, there is no standard that allows for compatibility of consumer electronics equipment and scrambled analog cable service without the use of a set-top box. Therefore, the encryption prohibition remains necessary for analog systems and, as proposed, the encryption prohibition would still apply in systems in which a cable operator carries any analog NTSC channel. *See* Appendix A (proposing to modify rule 76.630(a)(1)(i)).

also seek comment on whether the Commission should revise the encryption rule with respect to any hybrid (analog/digital) systems where basic service tier programming is provided digitally but the cable operator also continues to provide some analog service to its subscribers (which is the case in many cable systems today).[49] Would revision of the encryption rule with respect to those systems have any attendant benefits given that remote activation and deactivation of cable service is not feasible in hybrid systems?[50]

10. We further seek comment on whether our proposed rule would satisfy our regulatory obligations under Section 624A of the Communications Act. Section 624A directs the Commission to issue regulations as necessary to assure compatibility between televisions and video cassette recorders and cable systems, consistent with the need to prevent theft of cable service, so that cable subscribers will be able to enjoy the full benefit of both the programming available on cable systems and the functions available on their televisions and video cassette recorders.[51] Essentially, with Section 624A, Congress sought to develop a "plug and play"[52] compatibility regime.[53] We note that while Congress specifically cited scrambling and encryption as an impediment to compatibility, it nonetheless directed the Commission to "determine whether and, if so, under what circumstances to permit cable systems to scramble or encrypt signals or to restrict cable systems in the manner in which they encrypt or scramble signals."[54] Section 624A further prohibits the Commission from limiting the use of scrambling or encryption technology where the use of such technology does not interfere with the functions of subscribers' television receivers or video cassette recorders.[55] Based on Section 624A, we believe the Commission has broad authority to address and regulate encryption technology within the parameters established by Congress.

11. We recognize that some subscribers of only the basic service tier currently access digital cable service without a CableCARD or converter box. We tentatively conclude that if the Commission allows cable operators to encrypt the basic service tier in all-digital systems, we should, at the same time, minimize any instances of incompatibility due to encryption of the basic service tier by implementing transitional measures for the limited universe of subscribers who currently access the unencrypted digital basic service tier without a set-top box.[56] That is, we recognize that there are some consumers who currently are able to access the basic service tier without using a set-top box because of the current

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[49] *See* National Cable & Telecommunications Association Comments, MB Docket No. 11-105, at 2-3 (filed July 25, 2011).

[50] *Id.*

[51] 47 U.S.C. § 544a(b)(1).

[52] The term "plug and play" refers to a device's ability to plug into a cable system and receive cable programming without a cable-operator provided set-top box.

[53] *See, e.g.*, 47 U.S.C. § 544a(a)(2) ("if [compatibility] problems are allowed to persist, consumers will be less likely to purchase, and electronics equipment manufacturers will be less likely to develop, manufacture, or offer for sale, television receivers and video cassette recorders with new and innovative features and functions.").

[54] 47 U.S.C. § 544a(b)(2).

[55] *Id.*

[56] We understand that some computer peripherals mentioned in paragraph 6 and footnote 29 may not be compatible with set-top boxes. CableCARD-compatible computer peripherals may offer a solution to this problem. *See* OpenCable Unidirectional Receiver Specifications, *available at* http://www.cablelabs.com/opencable/downloads/specs/OC-SP-OCUR-I04-060622.pdf. We invite comment regarding this issue and any compatibility solutions available.

encryption prohibition.[57] Accordingly, to mitigate any potential harm experienced by these consumers, we believe our rules should implement transitional measures to prevent consumers from having to purchase or lease new equipment immediately in order to continue accessing the basic service tier if their cable operators choose to encrypt this tier.

12. When the Media Bureau granted the waiver authorizing Cablevision to encrypt the basic service tier, it conditioned that waiver to limit the immediate costs that basic service tier subscribers would face on account of the need for additional equipment like set-top boxes to provide digital televisions equipped with clear QAM tuners access to basic service tier channels. Those conditions require Cablevision to offer "(a) current basic-only subscribers up to two set-top boxes or CableCARDs without charge for up to two years, (b) digital subscribers who have an additional television set currently receiving basic-only service one set-top box or CableCARD without charge for one year, and (c) current qualified low-income basic-only subscribers up to two set-top boxes or CableCARDs without charge for five years."[58] We believe that similar measures are appropriate and necessary for purposes of relaxing the encryption ban because of the potential harm to basic-only subscribers who have come to rely on access to unencrypted basic-only service. A transition period will provide affected subscribers time to make informed choices about equipment and/or other alternatives available in their service area. We therefore propose that cable operators that choose to encrypt the basic service tier in their service area provide to subscribers, without charge for a limited time, devices that can decrypt the basic service tier as described above.[59] We seek comment on this proposal.

13. Are the consumer protection measures we propose to adopt adequate to protect all subscribers of digital cable systems in all areas of the country? We seek comment on the number of subscribers that this rule change will affect.[60] We also seek comment on an appropriate time frame for requiring cable operators to provide set-top boxes at no cost to current subscribers, and particularly with regard to low-income subscribers. Are the time frames established in the Cablevision proceeding appropriate to serve the goal of minimizing the immediate costs that basic subscribers and subscribers with additional sets receiving basic-only service face through this modification of the rules? In the context of the Cablevision waiver, the Media Bureau used receipt of Medicaid as an indicator of a current qualified low income basic-only subscriber.[61] Does it make sense to do so in the context of this NPRM? We invite commenters to suggest other indicators to delineate what constitutes a current qualified low income basic-only subscriber. Are additional safeguards necessary and appropriate, and, if so, what are

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[57] We note that the majority of channels the cable operators carry on the basic service tier are available to the public for free over the air with an antenna, and as referenced in footnote 20, the data we received from Cablevision suggests that basic service tier encryption in all-digital systems will have no effect the overwhelming majority of subscribers.

[58] *Cablevision Systems Corporation's Request for Waiver of Section 76.630(a) of the Commission's Rules*, 25 FCC Rcd 134, 136, 139-140 ¶¶ 5, 15 (MB 2010). The boxes that Cablevision offered to its subscribers are capable of outputting a high-definition picture. *Id.* at 139-140 ¶¶ 6, 15.

[59] In addition to CableCARDs, a cable operator could offer its subscribers either one-way or two-way set-top boxes. *See Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, 25 FCC Rcd 14657, 14679-81, ¶¶ 45-49 (2010).

[60] As explained in footnote 20, the data that we have indicates that waiver encryption of the basic service tier affects only a small minority of cable subscribers. We invite commenters to submit additional data to support or refute this conclusion.

[61] *Cablevision Systems Corporation's Request for Waiver of Section 76.630(a) of the Commission's Rules*, 25 FCC Rcd 134, 136, ¶ 5 (MB 2010) (citing Letter from Howard Symons, Counsel, Cablevision, to Marlene H. Dortch, Secretary, Federal Communications Commission, at Attachment (Dec. 17, 2009)).

these safeguards? Would an interim 7-year time period or longer be more consistent with ensuring there is not an economic hardship on low-income subscribers who prior to the potential relaxing of the encryption ban would not have needed additional equipment? We seek comment on any other measures the Commission should take to protect subscribers if we decide to relax the prohibition on encryption of the basic service tier for all-digital cable systems.

14. Although we propose to relax the encryption ban for all-digital systems, our proposal does not *require* cable operators operating those systems to encrypt the basic service tier. Rather, our proposed rule permits cable operators to encrypt this tier provided that they offer free set-top boxes to basic-only subscribers for a limited period of time. Because cable operators may decide whether they wish to encrypt under the requisite regulatory conditions (*i.e.*, provide set-top boxes at no cost to affected subscribers for a limited period), we see no statutory or constitutional constraints to imposing such a requirement. In that regard, we note that the proposed regulatory conditions would be implemented pursuant to our authority under Sections 624A,[62] not as a rate regulation prescribed under Section 623(b) of the Act. Accordingly, we do not believe Section 623(b)(3)(A)'s requirement to base on actual cost any price or rate standards for equipment installation and leasing would bar the Commission from imposing the set-top box condition for relaxing the encryption prohibition.[63] We seek comment on this analysis.

IV. PROCEDURAL MATTERS

A. Ex Parte Presentations

15. The proceeding this Notice initiates shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.[64] Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

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[62] In particular, we propose regulatory conditions pursuant to Section 624A(b)(2), which provides the Commission with discretion to adopt certain consumer protection measures to ensure that encryption does not interfere with the functions of devices that subscribers own. 47 U.S.C. § 544a(b)(2) ("the Commission shall determine whether and, if so, under what circumstances to permit cable systems to scramble or encrypt signals or to restrict cable systems in the manner in which they encrypt or scramble signals").

[63] 47 U.S.C. § 543(b)(3)(A).

[64] 47 C.F.R. §§ 1.1200 *et seq.*

B. Initial Regulatory Flexibility Analysis.

16. The Regulatory Flexibility Act of 1980, as amended ("RFA"), requires that a regulatory flexibility analysis be prepared for notice and comment rule making proceedings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities." The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction." In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act. A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).

17. With respect to this Notice, an Initial Regulatory Flexibility Analysis ("IRFA") under the Regulatory Flexibility Act[65] is contained in Appendix B. Written public comments are requested in the IFRA, and must be filed in accordance with the same filing deadlines as comments on the *Notice*, with a distinct heading designating them as responses to the IRFA. The Commission will send a copy of this *Notice*, including the IRFA, in a report to Congress pursuant to the Congressional Review Act. In addition, a copy of this *Notice* and the IRFA will be sent to the Chief Counsel for Advocacy of the SBA, and will be published in the *Federal Register*.

C. Paperwork Reduction Act Analysis.

18. This document proposes no new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13.

D. Comment Filing Procedures

19. Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: http://fjallfoss.fcc.gov/ecfs2/.

- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

- Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

    - All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.

[65] *See* 5 U.S.C. § 603.

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

- People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

20. *Additional Information:* For additional information on this proceeding, please contact Brendan Murray of the Media Bureau, Policy Division, Brendan.Murray@fcc.gov, (202) 418-1573.

V. ORDERING CLAUSE

21. Accordingly, **IT IS ORDERED** that, pursuant to the authority contained in Sections 1, 4(i), 4(j), 303(r), 403, and 624A of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 154(j), 303(r), 403, and 544a, this Notice of Proposed Rulemaking **IS ADOPTED**.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Proposed Rule

Part 76 of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

1. Amend § 76.630 to revise paragraph (a), delete Notes 1 and 4, and redesignate notes 2 and 3 as notes 1 and 2 to read as follows:

§ 76.630 Compatibility with consumer electronics equipment.

(a) Cable system operators shall not scramble or otherwise encrypt signals carried on the basic service tier.

(1) This prohibition shall not apply in systems in which:

(i) no television signals are provided using the NTSC system; and

(ii) the cable operator offers to its existing basic service tier subscribers (who do not use a set-top box or CableCARD at the time of encryption) the equipment necessary to descramble or decrypt the basic service tier signals (the subscriber's choice of a set-top box or CableCARD) on up to two separate television sets without charge for two years from the date of encryption; and

(iii) the cable operator offers to its existing digital subscribers who have an additional television set currently receiving basic-only service without a set-top box, the equipment necessary to descramble or decrypt the basic service tier signals on one television set without charge for one year from the date of encryption; and

(iv) the cable operator offers to all existing basic-only subscribers who receive Medicaid the equipment necessary to descramble or decrypt the basic service tier signals on up to two separate television sets without charge for five years from the date of encryption.

(2) Requests for waivers of this prohibition must demonstrate either a substantial problem with theft of basic tier service or a strong need to scramble basic signals for other reasons. As part of this showing, cable operators are required to notify subscribers by mail of waiver requests. The notice to subscribers must be mailed no later than thirty calendar days from the date the request **for** waiver was filed with the Commission, and cable operators must inform the Commission in writing, as soon as possible, of that notification date. The notification to subscribers must state:

> On (date of waiver request was filed with the Commission), (cable operator's name) filed with the Federal Communications Commission a request for waiver of the rule prohibiting scrambling of channels on the basic tier of service. 47 CFR § 76.630(a). The request for waiver states (a brief summary of the waiver request). A copy of the request for waiver shall

be available for public inspection at (the address of the cable operator's local place of business).

Individuals who wish to comment on this request for waiver should mail comments to the Federal Communications Commission by no later than 30 days from (the date the notification was mailed to subscribers). Those comments should be addressed to the: Federal Communications Commission, Media Bureau, Washington, DC 20554, and should include the name of the cable operator to whom the comments are applicable. Individuals should also send a copy of their comments to (the cable operator at its local place of business). Cable operators may file comments in reply no later than 7 days from the date subscriber comments must be filed.

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Note 1 to § 76.630: 47 C.F.R. § 76.1621 contains certain requirements pertaining to a cable operator's offer to supply subscribers with special equipment that will enable the simultaneous reception of multiple signals.

Note 2 to § 76.630: 47 C.F.R. § 76.1622 contains certain requirements pertaining to the provision of a consumer education program on compatibility matters to subscribers.

APPENDIX B

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended ("RFA")[1] the Commission has prepared this Initial Regulatory Flexibility Analysis ("IRFA") of the possible significant economic impact on small entities by the policies and rules proposed in this Notice of Proposed Rulemaking ("NPRM"). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the NPRM provided above. The Commission will send a copy of the NPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.[2] In addition, the NPRM and IRFA (or summaries thereof) will be published in the Federal Register.[3]

A. Need for, and Objectives of the Proposed Rules.

2. With this NPRM, the Commission seeks comment on elimination of the basic service tier encryption prohibition for all-digital cable systems.

3. The need for FCC regulation in this area derives from changing technology in the cable services market. When the Commission adopted technical rules in the 1990s, digital cable service was in its infancy, and therefore the rules were adopted with analog cable service in mind. Today, digital cable service is common, and certain technical rules related to cable service do not translate well. Therefore, the Commission proposes to allow all-digital cable operators to encrypt the basic service tier.

B. Legal Basis.

4. The authority for the action proposed in this rulemaking is contained in Sections 1, 4(i) and (j), 303, 403, 601, 624, and 624A of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i) and (j), 303, 403, 521, 544, and 544a.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply.

5. The RFA directs the Commission to provide a description of and, where feasible, an estimate of the number of small entities that will be affected by the proposed rules.[4] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental entity" under Section 3 of the Small Business Act.[5] In addition, the term "small

[1] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[2] *See* 5 U.S.C. § 603(a).

[3] *See id.*

[4] 5 U.S.C. § 603(b)(3).

[5] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies, "unless an agency, after consultation with the Office of Advocacy of the SBA and after opportunity for public comment, establishes one or more definitions of such the term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.

business" has the same meaning as the term "small business concern" under the Small Business Act.[6] A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration ("SBA").[7]

6. *Wired Telecommunications Carriers.* The 2007 North American Industry Classification System ("NAICS") defines "Wired Telecommunications Carriers" as follows: "This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services; wired (cable) audio and video programming distribution; and wired broadband Internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry."[8] The SBA has developed a small business size standard for wireline firms within the broad economic census category, "Wired Telecommunications Carriers."[9] Under this category, the SBA deems a wireline business to be small if it has 1,500 or fewer employees. Census Bureau data for 2002 show that there were 2,432 firms in this category that operated for the entire year.[10] Of this total, 2,395 firms had employment of 999 or fewer employees, and 37 firms had employment of 1,000 employees or more.[11] Thus, under this category and associated small business size standard, the majority of firms can be considered small.

7. *Wired Telecommunications Carriers -- Cable and Other Program Distribution.* This category includes, among others, cable operators, direct broadcast satellite ("DBS") services, home satellite dish ("HSD") services, satellite master antenna television ("SMATV") systems, and open video systems ("OVS"). The data we have available as a basis for estimating the number of such entities were gathered under a superseded SBA small business size standard formerly titled Cable and Other Program Distribution. The former Cable and Other Program Distribution category is now included in the category of Wired Telecommunications Carriers, the majority of which, as discussed above, can be considered small.[12] According to Census Bureau data for 2002, there were a total of 1,191 firms in this previous

[6] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

[7] 15 U.S.C. § 632. Application of the statutory criteria of dominance in its field of operation, and independence are sometime difficult to apply in the context of broadcast television. Accordingly, the Commission's statistical account of television stations may be over-inclusive.

[8] U.S. Census Bureau, 2007 NAICS Definitions, "517110 Wired Telecommunications Carriers"; http://www.census.gov/naics/2007/def/ND517110.HTM#N517110.

[9] 13 C.F.R. § 121.201, NAICS code 517110.

[10] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size: 2002 (Including Legal Form of Organization)," Table 5, NAICS code 517110 (issued November 2005).

[11] *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

[12] *See supra* ¶ 7. Under the superseded SBA size standard, which had the same NAICS code, 517110, a small entity was defined as one with $13.5 million or less in annual receipts.

category that operated for the entire year.[13] Of this total, 1,087 firms had annual receipts of under $10 million, and 43 firms had receipts of $10 million or more but less than $25 million.[14] Thus, we believe that a substantial number of entities included in the former Cable and Other Program Distribution category may have been categorized as small entities under the now superseded SBA small business size standard for Cable and Other Program Distribution. With respect to OVS, the Commission has approved approximately 120 OVS certifications with some OVS operators now providing service.[15] Broadband service providers (BSPs) are currently the only significant holders of OVS certifications or local OVS franchises, even though OVS is one of four statutorily-recognized options for local exchange carriers (LECs) to offer video programming services. As of June 2006, BSPs served approximately 1.4 million subscribers, representing 1.46 percent of all MVPD households.[16] Among BSPs, however, those operating under the OVS framework are in the minority.[17] The Commission does not have financial information regarding the entities authorized to provide OVS, some of which may not yet be operational. We thus believe that at least some of the OVS operators may qualify as small entities.

8. *Cable System Operators (Rate Regulation Standard).* The Commission has also developed its own small business size standards for the purpose of cable rate regulation. Under the Commission's rules, a "small cable company" is one serving 400,000 or fewer subscribers nationwide.[18] As of 2006, 7,916 cable operators qualify as small cable companies under this standard.[19] In addition, under the Commission's rules, a "small system" is a cable system serving 15,000 or fewer subscribers.[20] Industry data indicate that 6,139 systems have under 10,000 subscribers, and an additional 379 systems have 10,000-19,999 subscribers.[21] Thus, under this standard, most cable systems are small.

9. *Cable System Operators (Telecom Act Standard).* The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that,

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[13] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002 (NAICS code 517510) (issued November 2005).

[14] *Id.* An additional 61 firms had annual receipts of $25 million or more.

[15] *See* Current Filings for Certification of Open Video Systems, http://www.fcc.gov/mb/ovs/csovscer.html (last visited July 25, 2007); Current Filings for Certification of Open Video Systems, http://www.fcc.gov/mb/ovs/csovsarc.html (last visited July 25, 2007).

[16] *See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Thirteenth Annual Report, 24 FCC Rcd 542, 684, Table B-1 (2009) ("*13th Annual Report*").

[17] OPASTCO reports that fewer than 3 percent of its members provide service under OVS certification. *See id.* at 607, ¶ 135 n.473.

[18] 47 C.F.R. § 76.901(e). The Commission determined that this size standard equates approximately to a size standard of $100 million or less in annual revenues. *Implementation of Sections of the 1992 Cable Act: Rate Regulation,* Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7408 (1995).

[19] 74 TELEVISION AND CABLE FACTBOOK F-2 (Warren Comm. News eds., 2006); Top 25 MSOs – NCTA.com, *available at* http://www.ncta.com/ContentView.aspx?contentId=73 (last visited September 6, 2007). We arrived at 7,916 cable operators qualifying as small cable companies by subtracting the ten cable companies with over 400,000 subscribers found on the NCTA website from the 7,926 total number of cable operators found in the Television and Cable Factbook.

[20] 47 C.F.R. § 76.901(c).

[21] Warren Communications News, *Television & Cable Factbook 2006*, "U.S. Cable Systems by Subscriber Size," page F-2 (data current as of Oct. 2005). The data do not include 718 systems for which classifying data were not available.

directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed $250,000,000."[22] There are approximately 65.3 million cable subscribers in the United States today.[23] Accordingly, an operator serving fewer than 654,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed $250 million in the aggregate.[24] Based on available data, we find that the number of cable operators serving 654,000 subscribers or less totals approximately 7,916.[25] We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed $250 million.[26] Although it seems certain that some of these cable system operators are affiliated with entities whose gross annual revenues exceed $250,000,000, we are unable at this time to estimate with greater precision the number of cable system operators that would qualify as small cable operators under the definition in the Communications Act.

10. *Cable and Other Subscription Programming.* The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in operating studios and facilities for the broadcasting of programs on a subscription or fee basis . . . . These establishments produce programming in their own facilities or acquire programming from external sources. The programming material is usually delivered to a third party, such as cable systems or direct-to-home satellite systems, for transmission to viewers."[27] The SBA has developed a small business size standard for firms within this category, which is all firms with $15 million or less in annual receipts.[28] According to Census Bureau data for 2002, there were 270 firms in this category that operated for the entire year.[29] Of this total, 217 firms had annual receipts of under $10 million and 13 firms had annual receipts of $10 million to $24,999,999.[30] Thus, under this category and associated small business size standard, the majority of firms can be considered small.

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[22] 47 U.S.C. § 543(m)(2); *see* 47 C.F.R. § 76.901(f) & nn. 1-3.

[23] *See 13th Annual Report*, 24 FCC Rcd at 684, Table B-1.

[24] 47 C.F.R. § 76.901(f); *see* Public Notice, *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, DA 01-158 (Cable Services Bureau, Jan. 24, 2001).

[25] 74 TELEVISION AND CABLE FACTBOOK F-2 (Warren Commc'ns News eds., 2006); Top 25 MSOs – NCTA.com, *available at* http://www.ncta.com/ContentView.aspx?contentId=73 (last visited September 6, 2007). We arrived at 7,916 cable operators qualifying as small cable companies by subtracting the ten cable companies with over 654,000 subscribers found on the NCTA website from the 7,926 total number of cable operators found in the Television and Cable Factbook.

[26] The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority's finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission's rules. *See* 47 C.F.R. § 76.901(f).

[27] U.S. Census Bureau, 2007 NAICS Definitions, "515210 Cable and Other Subscription Programming"; http://www.census.gov/naics/2007/def/ND515210.HTM#N515210.

[28] 13 C.F.R. § 121.201 (NAICS code 515210).

[29] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Establishment and Firm Size (Including Legal Form of Organization): 2002, Table 4 (NAICS code 515210) (issued November 2005).

[30] *Id.* An additional 40 firms had annual receipts of $25 million or more.

11. *Computer Terminal Manufacturing.* "Computer terminals are input/output devices that connect with a central computer for processing."[31] The SBA has developed a small business size standard for this category of manufacturing; that size standard is 1,000 or fewer employees.[32] According to Census Bureau data, there were 71 establishments in this category that operated with payroll during 2002, and all of the establishments had employment of under 1,000.[33] Consequently, we estimate that all of these establishments are small entities.

12. *Other Computer Peripheral Equipment Manufacturing.* Examples of peripheral equipment in this category include keyboards, mouse devices, monitors, and scanners.[34] The SBA has developed a small business size standard for this category of manufacturing; that size standard is 1,000 or fewer employees.[35] According to Census Bureau data, there were 860 establishments in this category that operated with payroll during 2002.[36] Of these, 851 had employment of under 1,000, and an additional five establishments had employment of 1,000 to 2,499. Consequently, we estimate that the majority of these establishments are small entities.

13. *Audio and Video Equipment Manufacturing.* These establishments manufacture "electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications."[37] The SBA has developed a small business size standard for this category of manufacturing; that size standard is 750 or fewer employees.[38] According to Census Bureau data, there were 571 establishments in this category that operated with payroll during 2002.[39] Of these, 560 had employment of under 500, and ten establishments had employment of 500 to 999. Consequently, we estimate that the majority of these establishments are small entities.

D. Description of Reporting, Recordkeeping and Other Compliance Requirements

14. The rules proposed in the NPRM will not impose additional reporting, recordkeeping, and compliance requirements on cable operators.

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[31] U.S. Census Bureau, 2002 NAICS Definitions, "334113 Computer Terminal Manufacturing," *available at* http://www.census.gov/epcd/naics02/def/ND334113.HTM#N334113.

[32] 13 C.F.R. § 121.201, NAICS code 334113.

[33] U.S. Census Bureau, 2002 Economic Census, Industry Series: Manufacturing, "Computer Terminal Manufacturing," Table 4, NAICS code 334113 (issued Dec. 2004). In fact, all had employment of under 500.

[34] U.S. Census Bureau, 2002 NAICS Definitions, "334119 Other Computer Peripheral Equipment Manufacturing," *available at* http://www.census.gov/epcd/naics02/def/ND334119.HTM#N334119.

[35] 13 C.F.R. § 121.201, NAICS code 334119.

[36] U.S. Census Bureau, 2002 Economic Census, Industry Series: Manufacturing, "Other Computer Peripheral Equipment Manufacturing," Table 4, NAICS code 334119 (issued Dec. 2004).

[37] U.S. Census Bureau, 2002 NAICS Definitions, "334310 Audio and Video Equipment Manufacturing," *available at* http://www.census.gov/epcd/naics02/def/ND334310.HTM#N334310.

[38] 13 C.F.R. § 121.201, NAICS code 334310.

[39] U.S. Census Bureau, 2002 Economic Census, Industry Series: Manufacturing, "Audio and Video Equipment Manufacturing," Table 4, NAICS code 334310 (issued Dec. 2004).

E. Steps Taken to Minimize Significant Impact on Small Entities, and Significant Alternatives Considered.

15. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.[40]

16. As indicated above, the NPRM seeks comment on elimination of the basic service tier encryption prohibition for all-digital cable systems. The Commission considered leaving the current rule in place. The Commission tentatively concludes, however, that an exemption of the rule for all-digital cable systems could reduce the service calls that a cable operator must perform, and therefore the Commission believes that this proposed rule change will reduce burdens on small entities.

17. We welcome comments that suggest modifications of any proposal if based on evidence of potential differential impact on smaller entities. In addition, the Regulatory Flexibility Act requires agencies to seek comment on possible small entity-related alternatives, as noted above. We therefore seek comment on alternatives to the proposed rules that would assist small entities while ensuring improved customer support by cable operators for digital cable products purchased at retail.

F. Federal Rules Which Duplicate, Overlap, or Conflict with the Commission's Proposals.

18. None

[40] 5 U.S.C. § 603(b).