

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

In the Matter of)	
)	
Basic Service Tier Encryption)	MB Docket No. 11-169
)	
Compatibility Between Cable Systems and Consumer Electronics Equipment)	PP Docket No. 00-67
)	
Inter Mountain Cable Inc.’s Request for Waiver of Section 76.630(a) of the Commission’s Rules)	CSR-8483-Z
)	
RCN Telecom Services, Inc.’s, Request for Waiver of Section 76.630(a) of the Commission’s Rules)	CSR-8525-Z
)	
Coaxial Cable TV’s Request for Waiver of Section 76.630(a) of the Commission’s Rules)	CSR-8334-Z
)	
Mikrotec CATV LLC’s Request for Waiver of Section 76.630(a) of the Commission’s Rules)	CSR-8528-Z
)	

REPORT AND ORDER

Adopted: October 10, 2012

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By the Commission: Chairman Genachowski issuing a statement; Commissioners McDowell and Pai approving in part, concurring in part and issuing separate statements.

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I. INTRODUCTION

1. With this Report and Order (Order), we amend our rules to allow cable operators to encrypt the basic service tier in all-digital cable systems if they comply with certain consumer-protection measures. As discussed below, this rule change will benefit consumers who can have their cable service activated and deactivated from a remote location. By allowing remote activation and deactivation, we expect our amended rules will result in benefits to both cable operators and consumers by significantly reducing the number of truck rolls associated with provisioning service and significantly reducing the need for subscribers to wait for service calls to activate or deactivate cable service. At the same time, we recognize that this rule change will adversely affect a small number of cable subscribers who currently view the digital basic service tier without using a set-top box or other equipment. If a cable operator decides to encrypt the digital basic tier, then these subscribers will need equipment to continue viewing the channels on this tier. To give those consumers time to resolve the incompatibility between consumer electronics equipment (such as digital television sets) and newly encrypted cable service, we require operators of cable systems that choose to encrypt the basic service tier to comply with certain consumer protection measures for a period of time. In addition, we note that this rule change may impact the ability of a small number of subscribers that use certain third-party equipment that is not CableCARD compatible to access channels on the basic service tier. To address this issue, we require the six largest incumbent cable operators to comply with additional requirements that are intended to ensure compatibility with certain third-party-provided equipment used to access the basic tier.

II. BACKGROUND

2. In the Cable Television Consumer Protection and Competition Act of 1992 (“1992 Cable Act”), Congress sought to make sure that consumer electronics equipment could receive cable programming and that compatibility issues did not limit the premium features of that equipment. Section 17 of that law added Section 624A to the Communications Act of 1934, as amended.¹ 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 624A in part by adding Section 76.630(a) to its rules.³ Section 76.630(a) prohibits cable operators from scrambling or encrypting signals carried on the basic tier of service.⁴ Encryption is an essential component of a conditional access system, which cable operators use to ensure that subscribers receive only the services that they are authorized to receive.⁵ Nevertheless, 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.⁶ The Commission concluded that “[t]his rule also will have minimal impact on the

¹ 47 U.S.C. § 544a.

² *Id.*

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 47 C.F.R. § 76.630(a). Section 76.630(a), in pertinent part, provides that “[c]able system operators shall not scramble or otherwise encrypt signals carried on the basic service tier. 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.” *Id.*

⁵ *Nondiscrimination in Distribution of Interactive Television Services Over Cable*, 16 FCC Rcd 1321, 1332, n.27 (2001). Encryption is defined as “the transformation of data into a form unreadable by anyone without a secret encryption key.” See H. Newton, *Newton’s Telecom Dictionary* 300 (20th ed. 2004).

⁶ *Compatibility Order*, 22 FCC Rcd at 1990-92, ¶¶ 49-59.

cable industry in view of the fact that most cable systems now generally do not scramble basic tier signals.”⁷

3. In the mid-1990’s, cable operators began to upgrade their systems to offer digital cable service in addition to analog cable service (hybrid service).⁸ More recently, many cable operators have transitioned to more efficient all-digital service, freeing up spectrum to offer new or improved products and services like higher-speed Internet access and high definition programming.⁹ After a cable operator transitions to an all-digital system, most of its subscribers have at least one cable set-top box or retail CableCARD¹⁰ device in their homes.¹¹ We expect that the percentage of homes with set-top boxes or retail CableCARD devices will continue to increase as more cable operators eliminate analog service from their systems in favor of more efficient digital service.¹²

4. The percentage of homes with set-top boxes or CableCARD devices is high because most cable systems now scramble most of their signals. As cable operators began to transition programming on their cable programming service tier (“CPST”)¹³ to digital, many program carriage agreements

⁷ *Id.* at 1991, ¶ 55.

⁸ See generally <http://www.ncta.com/About/About/HistoryofCableTelevision.aspx>.

⁹ *Bend Cable Communications, LLC, Request for Waiver of Section 76.1204(a)(1)*, 22 FCC Rcd 209, 217-8, ¶¶ 24-25 (MB 2007); Brier Dudley, *Comcast: All customers will need adapters soon*, THE SEATTLE TIMES, August 15, 2012, available at http://seattletimes.nwsourc.com/html/technologybrierdudleysblog/2018925960_comcast_all_customers_will_need.html.

¹⁰ CableCARD devices are devices that can access linear 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 and the Ceton InfiniTV 4 tuner for personal computers 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).

¹¹ See Ian Olgeirson, Mari Rondeli, and Michelle Ow, *Q3 video subscriber trends improve but still lack real strength*, MULTICHANNEL MARKET TRENDS (SNL Kagan, Charlottesville, VA), Nov. 16, 2011, available at <http://www.snl.com/interactivex/article.aspx?id=13666901&KPLT=6> (reporting that 78.3 percent of cable subscribers are digital subscribers, which would necessitate a set-top box or CableCARD). Some consumers currently use devices with QAM tuners to receive digital service without a set-top box or CableCARD to view unencrypted basic service tier programming, but data that Cablevision filed with the Media Bureau indicates that the number of subscribers in this category is extremely limited, *e.g.*, only one-tenth of one percent of subscribers. See Cablevision Reply, MB Docket No. 08-168, at 1-2 (filed Nov. 16, 2009) (reporting that Cablevision has more than 700,000 subscribers in New York City); 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 that Cablevision deployed 739 free set-top boxes to basic service tier subscribers as a condition of its basic service tier encryption waiver, representing roughly one-tenth of one percent of Cablevision’s subscribers in New York City). See also *infra*, n. 21 (defining “QAM”).

¹² See BendBroadband Comments at 4 (reporting that set-top boxes are in 100 percent of BendBroadband’s subscribers’ homes, up from 55 percent before BendBroadband’s transition to all-digital service); Comcast Comments at 3-4 (announcing Comcast’s goal of transitioning at least 50 percent of its footprint to all-digital service); TWC Comments at 2-3 (describing an all-digital conversion pilot project in Augusta, Maine).

¹³ On most cable systems, 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.

required cable operators to encrypt that programming as a condition of carriage.¹⁴ In addition, cable operators use encryption as part of their conditional access system to ensure that cable service is available only to those who have paid for it.¹⁵ Particular methods of encryption, however, vary across cable systems, which could lead to incompatibility between consumer devices and cable service.¹⁶ In 2003, the Commission adopted the CableCARD standard to address this incompatibility problem.¹⁷ 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,¹⁸ decrypts the cable services. At present, over 78 percent of all cable subscribers have at least one leased set-top box or retail CableCARD device in their home.¹⁹ Cable operators who offer only digital service indicate that all of their subscribers have at least one leased set-top box or retail CableCARD device.²⁰ Some cable subscribers rely on QAM

¹⁴ “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.”).

¹⁵ Historically, cable operators have prevented subscribers from receiving signals to which they do not subscribe through the use of physical “traps” installed between the subscriber’s equipment and the cable operator’s plant, which block or scramble a signal. WALTER CICIORA ET AL, MODERN CABLE TELEVISION TECHNOLOGY 824-6 (2d ed. Morgan Kaufmann Publishers 2004). Digital encryption technology, in contrast, allows a cable operator to change the services that a subscriber receives without visiting the subscriber’s home and is more effective at preventing unauthorized access to content. *Id.* at 875-892.

¹⁶ 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).

¹⁷ *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.*

¹⁸ Retail CableCARD devices (such as set-top boxes, computer peripherals, and television sets) come without CableCARDS installed; subscribers who purchase such devices must lease the CableCARD from the cable operator and install it in the device in order to view encrypted programming. *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).

¹⁹ Ian Olgeirson, Mari Rondeli, and Michelle Ow, *Q3 video subscriber trends improve but still lack real strength*, MULTICHANNEL MARKET TRENDS (SNL Kagan, Charlottesville, VA), Nov. 16, 2011, available at <http://www.snl.com/interactivex/article.aspx?id=13666901&KPLT=6>.

²⁰ RCN Comments at 2 (“all legitimate RCN video subscribers already use set-top boxes or CableCARDS to access cable service”); BendBroadband Comments at 4 (“every single one of BendBroadband’s 35,000 customers has at least one set-top box and there [are] over 2.7 set-top boxes on average per household in the system.”). *See also* Comcast Comments at 14 (“across Comcast’s footprint, approximately 90% of its customers take digital service, and the average digital customer has 2.5 STBs or DTAs.”).

tuners²¹ in television sets and consumer electronics devices that allow access to unencrypted digital cable service without additional equipment,²² but, based on the record before us, we believe that few consumers rely on them for primary access to cable service.²³ The fact that most cable subscribers already have a cable set-top box or retail CableCARD device significantly reduces the number of subscribers who benefit from the prohibition on encryption of the basic service tier in all-digital systems in contrast to systems that carry analog service.²⁴

5. Our rules state that requests for waiver of the encryption prohibition “must demonstrate either a substantial problem with theft of basic tier service or a strong need to scramble basic signals for other reasons.”²⁵ Prior to 2010, the Commission had waived the rule based only on theft of service.²⁶ 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 transition to all-digital systems.²⁷ The petitioners argue that there are very few people who subscribe only to the basic service tier in all-digital systems, and that access to the basic tier would therefore be unaffected by encryption for the overwhelming majority of subscribers to such systems because they

²¹ “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 15, 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 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).

²² We understand, anecdotally, that these devices often are non-primary devices in households, such as television sets in guest rooms and kitchens.

²³ See *supra* n.11.

²⁴ We note that 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 data that Cablevision filed with the Media Bureau suggests that the number of subscribers in this category is relatively small, because few people took advantage of free equipment offered to subscribers that accessed digital basic service without set-top boxes or CableCARDS. 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).

²⁵ 47 C.F.R. § 76.630(a).

²⁶ 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). Theft of service occurs when unauthorized users physically connect their outlets to the cable plant. For example, people would climb poles and connect the cable operator’s coaxial cable to homes that do not subscribe to cable service. 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 combat the theft problem by educating consumers, penalizing offenders, pursuing civil actions, and assisting law enforcement officials in criminal actions. *Id.* at 15065, ¶ 3.

²⁷ 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*”).

already have a set-top box or CableCARD-equipped retail device.²⁸ Furthermore, they contend, encrypting the basic service tier in an all-digital system would eliminate the need for many service calls because it would allow cable operators to enable and disable cable service remotely, activating and deactivating the encryption capability of set-top boxes and CableCARDS from the headend rather than visiting subscribers' homes.²⁹ Today, cable operators typically must manually connect and disconnect the cable that runs to a home to activate or deactivate service and use traps to block access to particular channels.³⁰ If the cable operator were allowed to encrypt every signal, the operator could keep every home connected to the cable plant regardless of whether the home subscribes to cable service. In addition, the operator could ensure that only paid subscribers are able to access the service by authorizing and deauthorizing CableCARDS, or other legitimate devices, as people subscribe to or cancel cable service.³¹

6. 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.³² 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.³³ 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 CO₂ emissions."³⁴ 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 occasions when they must wait at home for a service call, as compared to unencrypted cable systems.³⁵ The Bureau reasoned that Cablevision would sufficiently address 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."³⁶ Finally, the Bureau also concluded that the waiver would "provide an

²⁸ See *RCN Request* at 1-2.

²⁹ *Id.* at 6-7.

³⁰ See *supra*, n.15.

³¹ Without the CableCARD, which is necessary to decrypt the service, a device cannot decrypt and display any encrypted signals it receives. Therefore, if all signals are encrypted, cable operators can send cable signals into every home passed without allowing non-subscribers 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 logistically 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."). We note that as of November 1, 2011, our rules 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); *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, 25 FCC Rcd 14657, 14669-14673, ¶¶ 20-29 (2010).

³² *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*").

³³ *Id.* at 139, ¶ 12.

³⁴ *Id.*

³⁵ *Id.*

³⁶ *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 (continued....)

experimental benefit that could be valuable in the Commission's further assessment of the utility of the encryption rule,³⁷ and therefore required Cablevision to file three reports detailing the effect of encryption on subscribers.³⁸ Four cable operators have filed similar petitions for waiver with the Commission's Media Bureau since the release of the *Cablevision Waiver*.³⁹

7. In the wake of these petitions as well as requests from Public Knowledge and Media Access Project for the Commission to deal with the basic service tier encryption issue by launching a rulemaking proceeding,⁴⁰ the Commission issued a *Notice of Proposed Rulemaking* in October 2011.⁴¹ The Commission proposed to allow cable operators to encrypt the basic service tier in all-digital systems, subject to conditions that would minimize disruption for affected subscribers by providing a transition period in which to make informed choices about purchasing or leasing new equipment to continue accessing service.⁴² Based on the reports that Cablevision submitted as a condition of its waiver, the Commission in the *Encryption NPRM* predicted that the rule change would reduce truck rolls and service calls with modest adverse effects on few subscribers.⁴³ We received comments or reply comments on the *Encryption NPRM* from 34 parties, and a number of subsequent ex parte filings. The parties' positions are described in the ensuing Discussion.

III. DISCUSSION

8. Because of the public benefits associated with allowing all-digital cable operators to encrypt the basic service tier, we amend our rule to permit this practice as long as the cable operator complies with certain consumer protection measures.⁴⁴ Encryption of all-digital cable service will allow cable

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five years." *Cablevision Waiver*, 25 FCC Rcd at 136, 139-140 ¶¶ 5, 15. The boxes that Cablevision offered to its subscribers are capable of outputting a high-definition picture. *Id.*

³⁷ *Id.* at 140, ¶ 16.

³⁸ 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 paragraphs 7 and 12. 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).

³⁹ 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).

⁴⁰ 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 *Basic Service Tier Encryption; Compatibility Between Cable Systems and Consumer Electronics Equipment*, 26 FCC Rcd 14870 (2011) ("*Encryption NPRM*").

⁴² *Encryption NPRM*, 26 FCC Rcd 14870, 14878-80, ¶¶ 11-14 (2011).

⁴³ *Id.* at 14876-77, ¶ 8 (2011).

⁴⁴ At ACA's request, we clarify that under our rule cable operators will be permitted, but not required, to encrypt the basic service tier. ACA Comments at 12.

operators to activate and deactivate cable service remotely, thus relieving many consumers of the need to schedule appointments when they sign up for or cancel cable service. In addition, encryption will reduce the number of truck rolls necessary for manual installations and disconnections, reduce service theft, and establish regulatory parity between cable operators and their satellite competitors, who are not subject to the encryption rule. We find these benefits offset the increased burdens that may result from encryption of the basic service tier. Recognizing, as noted above, that some consumers rely on unencrypted basic tier service, we adopt narrowly tailored consumer protection measures to help ease the transition to encrypted service for those consumers. In the sections below, we first discuss which systems will be allowed to encrypt the basic service tier. Then we discuss the benefits associated with permitting all-digital cable operators to encrypt the basic service tier, as well as the burdens associated with our rule change and consumer protection measures we adopt to mitigate those burdens. Finally, we discuss the legal basis for the rule changes.

A. Systems Eligible to Encrypt

9. In the *Encryption NPRM*, the Commission proposed to allow encryption of the basic service tier only with respect to all-digital systems “because remote activation and deactivation of cable service, and its attendant benefits, are only feasible in all-digital systems.”⁴⁵ For this reason, we limit encryption eligibility of the basic tier to all-digital systems. The Commission proposed to define an “all-digital”⁴⁶ system as one in which “no television signals are provided using the NTSC system.”⁴⁷ As explained below, we adopt our proposed definition, finding that it will best achieve our goal of facilitating remote activation and deactivation of cable service “while minimizing interference with the special functions of subscribers’ television sets.”⁴⁸

10. Commenters suggested several substantive changes to our proposed rule. Several commenters suggested that we extend encryption eligibility to cable operators that offer unencrypted analog “barker channels.”⁴⁹ Mikrotec and Inter Mountain Cable suggested that operators should be allowed to encrypt the basic service tier as long as all “programming”⁵⁰ on the basic tier is transmitted digitally and “if that condition is met, then there should be no concern that the system otherwise uses analog modulation.”⁵¹ They also suggest that eligibility to encrypt should be determined subscriber-by-

⁴⁵ *Encryption NPRM*, 26 FCC Rcd at 14877, ¶ 9 (2011). Public Knowledge and Media Access Project note in their comments that remote activation and deactivation are technically feasible if the cable operator does not encrypt any of its analog programming and delivers all of that programming to every house regardless of whether the house subscribes. PK and MAP Comments at 13. Nothing in our current rules would prevent an operator from delivering unencrypted all tiers of service if they wanted to, but no commenter suggested that cable operators want to deliver all analog programming unencrypted—delivering program unencrypted increases the chance for theft of service.

⁴⁶ *Encryption NPRM*, 26 FCC Rcd at 14877-8, ¶ 9 (2011).

⁴⁷ *Id.* at 14883, *Appendix A*.

⁴⁸ See 47 U.S.C. § 544a(c)(1) (directing the Commission to adopt regulations that “minimize interference with or nullification of the special functions of subscribers’ television receivers.”).

⁴⁹ NCTA Comments at 10-11; Eric Kotz Comments at 3; Comcast Comments at 8, n.19; ACA Reply at 11. NCTA explains that cable operators may transmit “analog barker channels explaining how to subscribe or promoting digital services, and may even combine locally-inserted informational channels.” NCTA Comments at 10. The term “barker channel” generally refers to menu, directory, or promotional video channels. See *Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992: Rate Regulation*, 9 FCC Rcd 4119, 4157, n.118 (1994); *Playboy Entertainment Group, Inc. v. U.S.*, 30 F.Supp.2d 702, 719 (D. Del. 1998).

⁵⁰ Mikrotec and Inter Mountain Cable define “programming” to include “TV station programming, the PEG channel programming and any cable network programming (e.g., CNN, TNT).” Mikrotec and Inter Mountain Cable Comments at 3.

⁵¹ *Id.*

subscriber, not on a system-by-system basis, because cable operators may elect to transition portions of systems to all-digital piecemeal, and the rule should not discourage that practice.

11. We believe the best criterion for eligibility to encrypt the basic service tier is that the system carries only digital signals aside from unencrypted analog barker channels. Encryption on hybrid systems (that is, systems that transmit signals in analog and digital) would not generate the benefits associated with encryption on all-digital systems because the analog portion of the system will still require truck rolls to activate and deactivate service and the Commission does not have a separated security solution like CableCARD to ensure that retail devices can access scrambled analog cable programming.⁵² Therefore, permitting hybrid systems to encrypt would not result in the type of benefits that justify easing the encryption requirement for all-digital systems. We do not believe that it is practical to adopt Mikrotec and Inter Mountain Cable's proposal to determine eligibility for encryption on a consumer-by-consumer basis,⁵³ because encryption disparity on a consumer-by-consumer basis could lead to consumer confusion: under this proposal, one subscriber could be subject to encryption (and the commensurate consumer-protection measures described below), while his neighbor could face no encryption and be able to access channels on the basic service tier. The administrative burdens of determining the applicability of the rule would also make such a proposal unreasonable. Therefore, we believe that our rule, which determines eligibility for encryption on a system-wide basis, is more reasonable and will better serve the public interest.⁵⁴

B. Benefits of Permitting Basic Service Tier Encryption

12. *Remote Activation and Deactivation.* Based on examination of the record, we are persuaded that allowing encryption of the basic service tier on all-digital systems will reduce the need for many consumers to schedule a service call and wait for the cable technician to arrive before initiating or terminating their cable service. ACA states in its comments that physical connection and disconnection of cable service in all-digital systems is "unnecessary but for the existence of the basic service tier encryption prohibition."⁵⁵ Comcast predicts that encrypting the basic service tier will allow the company to perform nearly half of its activations and 90 percent of its deactivations remotely.⁵⁶ Cablevision

⁵² Public Knowledge and Media Access Project propose that hybrid systems (systems that carry analog and digital video programming) should be eligible to encrypt if (1) the operator does not encrypt any channels it provides via analog transmission, and (2) the operator uses remote activation and does not require a service visit to begin service. PK & MAP Comments at 13. We do not believe that this approach would be any different in practice than the rule we adopt, which prohibits hybrid systems from encrypting the basic service tier, because no operator would be able to meet the second criterion. As Cablevision explains in its comments, remote activation is not feasible for every new subscriber until every home has an active and encrypted connection to the cable network, which would not be the case for the analog portion of the hybrid system. Cablevision Comments at 12-13. To the extent that digital service is encrypted but the operator also provides an analog barker channel that is unencrypted, the operator is still able to remotely activate and deactivate service.

⁵³ Mikrotec and Inter Mountain Cable suggest that we allow encryption when "[n]o television programming is provided to the subscriber using the NTSC system." Mikrotec and Intermountain Cable Comments at 8 (emphasis added).

⁵⁴ As discussed below, as a consumer-protection measure, we will require cable operators that choose to encrypt to notify all subscribers about encryption of the basic service tier and to offer them free set-top boxes for a period of time. See *infra* ¶¶ 16-24.

⁵⁵ ACA Comments at 3; see also Public Knowledge Comments at 4-5, Comcast Comments at 4-6.

⁵⁶ Comcast Comments at 6-7. Comcast explained that, "[r]emote service activations are likely to be commonplace in situations where a new customer is signing up for cable service that involves a simple connection of a set-top box or CableCARD-enabled device to a TV set, or connecting a cable modem for high-speed Internet service to a single PC or laptop." Letter from Jonathan Friedman, Counsel for Comcast Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 11-169 (Jan. 20, 2012). Consumers who subscribe to

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reports that, since it received waiver of the encryption prohibition, 99.5 percent of its deactivations were performed remotely and a growing number of its new customers are eligible for remote activation.⁵⁷ The result for consumers is that in many cases they will no longer need to rearrange their schedules to wait for cable technicians to arrive at their homes in order to activate and deactivate their cable service, making activation and deactivation of service much more convenient.⁵⁸

13. In addition to the projected time savings for subscribers because of remote activation and deactivation, the record is replete with secondary benefits that cable operators and their customers will realize as a result of remote service change. These include savings for cable operators because of a reduction in the need to dispatch service technicians to customers' homes. For example, commenters assert that reduced costs due to truck rolls and system maintenance will save cable operators money that they can use to "invest in innovative new products that customers demand and highly value."⁵⁹ In addition, Comcast states that, with remote activation and deactivation, "technicians would need to access drop lines less frequently, thereby reducing 'wear-and-tear' on the lines and the need for maintenance."⁶⁰ Many commenters also highlight the benefits remote activation and deactivation will have on vehicle traffic and the environment.⁶¹ Microtek and Inter Mountain Cable even suggest that these increased efficiencies could lead to lower rates for subscribers.⁶²

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certain services, such as whole-home digital video recorders or bundled services, may require a professional installation because installing those services is complex. *Id.* Comcast states that "truck rolls for service reconnections could be reduced further as Comcast gains increased confidence that wiring in customers' homes is adequate to support remote installations of multiple services." *Id.*

⁵⁷Cablevision Comments at 12; Cablevision Reply at 1. Cablevision indicates that as of October 2011, the percentage of households eligible for a "truckless reconnect" reached nearly 40 percent of all new and transferred connections, and that "Cablevision is expanding the opportunities for consumers to self-install services." Letter from Christopher J. Hardie, Counsel for Cablevision Systems Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 11-169 (Jan. 24, 2012). Like Comcast, Cablevision states that certain homes may be ineligible for remote activation due to "home inside wiring issues" and "the variety of service configurations and issues that need to be addressed." *Id.*

⁵⁸MMTC Comments at 2-3; Letter from C. Kim Bracey, Mayor, City of York, Pennsylvania, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 11-169, PP Docket No. 00-67 (Dec. 8, 2011); TWC Comments at 4. A recent survey by TOA Technologies estimates that the cost of the time spent waiting for in-home service from cable, satellite, telephone, utility and other service providers amounts to \$37.7 billion per year. TOA Technologies, 2011 Cost of Waiting Survey, United States Results 5, 7-8, *available at* http://toatech.com/costofwaiting/documents/TOA-Cost-of-Waiting-US_2011.pdf (2011). That survey also estimates that MVPD service is the most common cause for in-home waiting, with 57 percent of respondents having waited for a cable or satellite provider over the past year with an average wait time of over four hours. *Id.* While not all of this cost can be attributed to waiting for a cable technician (rather than satellite or other technician), the time that this rule change may save consumers could be worth billions of dollars.

⁵⁹Comcast Comments at 12; *see also* Letter from J. Richard Gray, Mayor, City of Lancaster, Pennsylvania, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 11-169, PP Docket No. 00-67 (Dec. 9, 2011); NCTA Comments at 8; Public Knowledge Comments at 4-5; TWC Comments at 5. The costs associated with installing traps used to physically block or scramble the signals are substantial. *See supra*, n. 15. BendBroadband estimates that the cost to the cable operator of installing and maintaining traps is \$200 per subscriber over four years, money that could be better spent on new services or system upgrades. BendBroadband Comments at 2.

⁶⁰Comcast Comments at 11.

⁶¹*See, e.g.*, Cablevision Comments at 10-11; NCTA Comments at 6; TWC Comments at 4; TWC Reply at 2; Letter from Tomas Regalado, Mayor, City of Miami, Florida, to Julius Genachowski, Chairman, Federal Communications Commission, MB Docket No. 11-169 (Dec. 12, 2011); HTTP Comments at 1; Letter from Wayne Smith, Mayor, Township of Irvington, N.J., to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket

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14. *Reduction of Theft and Piracy.* Another benefit of basic tier encryption is the likely reduction in theft of cable service.⁶³ In 2004, NCTA estimated that five percent of homes passed receive unauthorized cable service, which equates to five billion dollars in unrealized revenue that cable operators could dedicate to offering improved services.⁶⁴ The resulting reduction in cable operator revenues may increase the rates operators charge their subscribers.⁶⁵ In addition, Comcast explains that theft of service reduces the quality of cable service because thieves sometimes access the cable system by splitting cables and adding unauthorized taps, which degrade connections and can lead to signal leakage and lower broadband speeds.⁶⁶ This unauthorized splicing also can add to wear-and-tear on the cable system and increase the need for maintenance.⁶⁷ Encryption of the basic service tier will discourage thieves from splicing cable lines as it will not enable viewing of the signals without leasing an authorized set-top box or CableCARD from the operator. Encryption of the basic service tier could also benefit channels that are carried on the basic service tier, as developers of high-value content may be more willing to make the content available to basic service tier channels if they are encrypted and less susceptible to piracy.⁶⁸

15. *Regulatory Parity.* Several commenters emphasized that the proposed rule change will increase regulatory parity between cable operators and satellite providers, which are not subject to the encryption rule.⁶⁹ Commenters explain that the technology and market landscapes were quite different when the rule was adopted, when consumers had a reasonable expectation that they would be able to connect their televisions directly to a coaxial cable without the need for a set-top box.⁷⁰ In the years since enactment of the 1992 Cable Act, consumer expectations have changed substantially. First, cable

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No. 11-169 (Dec. 9, 2011); *but see* Greg Cunningham Comments at 1; Montgomery County, MD Comments at 6-7 (arguing that the power consumed by set-top boxes will offset the environmental impact of reduced truck rolls).

⁶² Mikrotek and Inter Mountain Cable Comments at 5; *but see* Craig Arnold Comments at 1; Shawn Foy Comments at 1 (arguing that basic tier encryption will increase costs to consumers).

⁶³ Letter from John Nakahata, Counsel for RCN Telecom Services, LLC, to Marlene H. Dortch, Secretary, Federal Communications Commission, at 1-2 (filed February 24, 2012) (“We explained to Ms. McGrath that, while RCN’s internet-only offerings help fulfill the Commission’s broadband objectives, they also increase RCN’s exposure to theft of basic tier cable service. We noted that the problem of theft is exacerbated by the fact that there are no commercially available cable ‘traps’ that will permit RCN to physically block access to the unencrypted channels that accompany its internet service without also blocking the internet service itself.”).

⁶⁴ NCTA Comments at 7; TWC Comments at 5. *See RCN Request* at 3-6 (reporting the results of two separate audits in Chicago: one revealed that at least 12 percent of homes received service without paying for it and another revealed that at least 20 percent of homes received service without paying for it).

⁶⁵ *See* Mikrotek and Inter Mountain Cable Comments at 5 (indicating that elimination of the costs associated with the basic service tier encryption ban could lead to lower rates).

⁶⁶ Comcast Comments at 11; BendBroadband Comments at 3.

⁶⁷ Comcast Comments at 11; *see also* RCN Comments at 3; TWC Comments at 5; Letter from Carlos Hernandez, Mayor, City of Hialeah, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 11-169 (Dec. 7, 2011); Letter from Tomas Regalado, Mayor, City of Miami, Florida, to Julius Genachowski, Chairman, Federal Communications Commission, MB Docket No. 11-169 (Dec. 12, 2011); Letter from C. Kim Bracey, Mayor, City of York, Pennsylvania, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 11-169, PP Docket No. 00-67 (Dec. 8, 2011); Letter from Wayne Smith, Mayor, Township of Irvington, N.J., to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 11-169 (Dec. 9, 2011).

⁶⁸ MPAA Reply at 2-3; Cablevision Comments at 7-10.

⁶⁹ *See, e.g.,* BendBroadband Comments at 3, 7; Cablevision Comments at 5; Mikrotek and Inter Mountain Cable Comments at 4-5.

⁷⁰ TWC Reply at 3.

operators have introduced new and innovative services, such as video on demand and pay-per-view services, that cannot be accessed by digital subscribers without an authorized set-top box or, in some instances, a CableCARD.⁷¹ As a result, almost all digital subscribers already use set-top boxes or CableCARDS to access cable service.⁷² Second, since the 1992 Cable Act, satellite television operators have begun to offer video programming services to tens of millions of subscribers,⁷³ who access these services through the use of one or more converter boxes. Our rules do not prohibit satellite operators from encrypting their services, and therefore they are able to make service changes remotely and in real time. Cable operators argue that this puts them at a regulatory disadvantage vis-à-vis their competitors that are not constrained by the requirements of Section 76.630(a).⁷⁴ We believe that by amending our encryption rule we will reduce this regulatory disparity and enable all-digital cable operators to provide a similar level of customer service as their MVPD competitors.

C. Consumer Protection Measures to Reduce Burdens on Subscribers

16. Although we expect our rule change will affect relatively few subscribers,⁷⁵ we nonetheless adopt consumer protection measures to mitigate any resulting harm to subscribers who are impacted by encryption of the digital basic tier. This rule change will impact the few digital cable subscribers who access the basic service tier without a set-top box or CableCARD⁷⁶: they will need to obtain a set-top box

⁷¹ Cablevision Comments at 4; NCTA Comments at 3. Although in general retail CableCARD devices can only access cable operators' linear programming services, some operators are making certain two-way services available to retail partners. Letter from Natalie G. Roisman, Counsel to Cox Enterprises, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, CS Docket No. 97-80 (filed Oct. 8, 2010) (documenting Cox's plan to offer on-demand programming directly to certain retail CableCARD devices).

⁷² See *supra*, n.20.

⁷³ *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 24 FCC Rcd 542, 684, Appendix B-1 (2007); See <http://www.ncta.com/Stats/TopMSOs.aspx> (visited January 7, 2012) (reporting that DIRECTV, Dish Network, Verizon and AT&T serve more than 40 million subscribers in total).

⁷⁴ BendBroadband Comments at 3; Cablevision Comments at 5; Mikrotec and Inter Mountain Cable Comments at 4-5.

⁷⁵ We note, in this regard, that only one-tenth of one percent of Cablevision's subscribers in the affected systems availed themselves of Cablevision's free device offer. See *supra* n.11.

⁷⁶ The *Encryption NPRM* identified two types of devices that subscribers use to view unencrypted QAM signals: (i) television sets with QAM tuners, and (ii) devices such as computer peripherals that have coaxial and IP-based inputs. *Encryption NPRM*, 26 FCC Rcd at 14874-5, n.29. The main difference between these devices is that television sets have high definition multimedia interface ("HDMI") inputs, whereas computer peripherals do not. Letter from Neal M. Goldberg, Vice President and General Counsel, National Cable and Telecommunications Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, at 5, n.16 (Feb. 7, 2012) ("Feb. 7 NCTA Ex Parte"). The *Encryption NPRM* proposed a set of free box conditions to address the first category, and sought comment on appropriate measures for the second. *Encryption NPRM*, 26 FCC Rcd at 14874-5, n.29. Commenters pointed out that the set-top boxes that cable operators lease to their subscribers include standard connectors that are compatible with all or nearly all television sets sold in the United States; however, those set-top boxes typically do not have connections to enable consumers to continue to use computer peripherals or similar devices. See Letter from Melissa Marks, General Counsel, Boxee Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission at 2-3 (Dec. 21, 2011) ("Boxee Dec. 21 Ex Parte"); Feb. 7 NCTA Ex Parte at 5, n.16. See also Letter from Jonathan Friedman, Counsel for Comcast Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, CS Docket No. 97-80, at 1 (Oct. 7, 2010). Several companies and consumers explain that they rely on clear QAM with personal computers or retail set-top boxes designed to receive content from a variety of sources. See, e.g., Letter from Christopher Southwick to Julius Genachowski, Chairman, Federal Communications Commission (filed by Public Knowledge, March 21, 2012); Letter from David Yeubanks to Julius Genachowski, Chairman, Federal Communications Commission (filed by Public Knowledge, March 21, 2012); Letter from Robert DiPietro to Marlene H. Dortch, Secretary, Federal Communications Commission (filed

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or CableCARD from their cable operator once the operator encrypts the basic service tier. To give these consumers time to assess their options to access encrypted cable service, we will require cable operators that choose to encrypt to offer affected subscribers equipment necessary to receive the encrypted programming without charge for a limited time, and to notify their subscribers about encryption and the equipment offers. In addition, we require the six largest incumbent cable operators to offer equipment that is compatible with IP-enabled clear-QAM devices provided by third parties. We intend that this requirement will provide an opportunity for affected consumers to make informed choices about whether to purchase a CableCARD-compatible device, lease a set-top box from their cable operator, or use another method to access the broadcast and other channels carried on the basic service tier (for example, by accessing the signals over-the-air or via another MVPD). As we explained in the *Encryption NPRM*, such an opportunity will minimize the impact of encryption on clear-QAM users by offering a transition period during which they can continue to access the basic tier without an additional equipment charge while they consider their options for device compatibility.⁷⁷ In this section, we identify the small class of subscribers that encryption may affect and adopt two categories of measures to protect those subscribers: transitional equipment requirements and notice requirements.

17. *Subscribers That May Be Affected by Encryption of the BST.* The Commission concluded in 1994 that adopting the basic service tier encryption prohibition “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.”⁷⁸ Today our examination of the record reflects that relaxing the encryption prohibition for all-digital systems will have minimal impact on consumers because most subscribers do not rely on the clear-QAM tuners in their devices to access basic tier signals.⁷⁹ Nevertheless, we recognize that lifting the encryption prohibition may impact some cable subscribers who use clear-QAM devices to access the basic tier, such as subscribers who use second or third television sets to access unencrypted digital basic service tier service without set-top boxes or CableCARDS and subscribers that use third-party provided IP-enabled devices that have clear-QAM tuners. Several cable subscribers and equipment manufacturers filed comments claiming that our rule change would have a negative impact on them.⁸⁰ These subscribers explain that they rely on clear-QAM tuners in their electronic devices (such as computers and television sets) to access basic tier programming, and that because they have more than two devices on which to view BST programming (*e.g.*, they have multiple televisions in their home), their monthly bills will

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January 27, 2012); Hauppauge Computer Works, Inc. Ex Parte at 2-3 (Dec. 22, 2011) (“Hauppauge Ex Parte”); Boxee Dec. 21 Ex Parte at 2-3.

⁷⁷ *Encryption NPRM*, 26 FCC Rcd at 14879 ¶¶ 11-12.

⁷⁸ *Compatibility Order*, 9 FCC Rcd at 1991, ¶ 55.

⁷⁹ See Cablevision Comments at 13 (reporting that less than 2% of its total subscriber base in New York subscribes only to the basic service tier, and the subset of those customers receiving their basic service via QAM tuner is even smaller). See also BendBroadband Comments at 3-4; PK and MAP Comments at 2 (“technology has changed and the rule no longer serves its purpose”); NCTA Comments at 8-9.

⁸⁰ See, *e.g.*, Shawn Foy Ex Parte (filed Dec. 27, 2011); Richard Utz Comments at 1; Greg Cunningham Comments at 1; Craig Arnold Comments at 1. Boxee Dec. 21 Ex Parte at 1-3; Hauppauge Ex Parte at 1-2; Shawn Foy Ex Parte (filed Dec. 27, 2011). Local franchising authorities also filed comments suggesting that the proposed rule change will affect many more subscribers than the Commission predicts because many subscribers will need boxes for non-primary television sets. See, *e.g.*, City of Boston Comments at 4-5; Montgomery County, MD Comments at 2-3; New Jersey Division of Rate Counsel Comments at 6. As Comcast responds in its reply, however, these local franchising authorities conflate digitization and encryption—once a system is all-digital, nearly all of the subscribers in that system will have decryption equipment regardless of whether the system encrypts because (i) that equipment is also used to convert digital service into an analog signal, and (ii) that equipment is necessary to view any programming aside from the basic service tier on any television set. Comcast Reply at 10. Therefore we expect the impact of basic service tier encryption to be very limited in scope.

increase because they will need a greater number of converter boxes than afforded under the free box conditions that the Commission proposed in the *Encryption NPRM*.⁸¹ We are concerned about the effect of this rule change on the small group of subscribers who access unencrypted basic service tier programming through clear-QAM receivers, but, at the same time, recognize that no consumer protection measure could fully satisfy every affected subscriber. Nonetheless, we believe that the consumer-protection measures outlined below are appropriate and necessary to minimize disruption to affected subscribers by providing a reasonable transition period to make informed choices about the options available to access the basic tier.

18. *Transitional Equipment Requirements Applicable to All Cable Operators.* To limit the costs that affected consumers may face due to encryption, we adopt our proposed consumer-protection measures that require a cable operator that chooses to encrypt the basic service tier to: (i) offer to existing subscribers who subscribe only to the basic service tier and do not use a set-top box or CableCARD, the subscriber's choice of a set-top box or CableCARD on up to two television sets without charge for two years from the date of encryption; (ii) offer existing subscribers who subscribe to a level of service above "basic only" but use an additional television set to access only the basic service tier without the use of a set-top box or CableCARD at the time of encryption, the subscriber's choice of a set-top box or CableCARD on one television set without charge for one year from the date of encryption; and (iii) offer existing subscribers who receive Medicaid,⁸² subscribe only to the basic service tier, and do not use a set-top box or CableCARD, the subscriber's choice of a set-top box or CableCARD on up to two television sets without charge for five years from the date of encryption. These consumer protections apply to televisions and devices connected to the cable system at the time of encryption. To ensure that any subscriber likely to be affected by encryption has adequate time to consider these offers, we will require cable operators to keep the offer open to subscribers for at least 30 days before the date the operator begins encrypting the first basic tier channel on the channel lineup and for at least 120 days after that date. NCTA suggested that the offer extend for only 30 days after the date that encryption begins. We believe that 30 days after the date of encryption would not afford affected consumers sufficient time to learn about the effect of encryption and the consumer-protection measures available to them and act on the information. Furthermore, because encryption will affect only a very small number of subscribers, the consumer protection measures we adopt will not be unduly onerous on cable operators.⁸³ We expect these transitional protections will substantially mitigate the costs to affected subscribers while they consider alternative means for accessing the basic service tier.⁸⁴

19. *Equipment Requirements Applicable to Top Six Incumbent Cable Operators.* A few commenters assert that the free equipment conditions described above do not mitigate any disruption

⁸¹ Shawn Foy Ex Parte (filed Dec. 27, 2011); Richard Utz Comments at 1; Greg Cunningham Comments at 1; Craig Arnold Comments at 1.

⁸² As we explain in paragraph 26, we believe that Medicaid is a reasonable way to establish need. Medicaid users receive readily identifiable identification cards that should make it easy for cable operators to identify whether a subscriber is eligible for this protection. Cablevision Reply at 10, Comcast Reply at 6, NCTA Reply at 3.

⁸³ NCTA Comments at 11-12. *See, e.g.,* NCTA Comments at 9 ("In all-digital cable systems, almost all customers will already have a set-top box or CableCARD to access digital services."); Cablevision Comments at 13-14; BendBroadband Comments at 4 ("every single one of BendBroadband's 35,000 customers has at least one set-top box").

⁸⁴ The lengths of these transitional periods are the same afforded Cablevision subscribers when Cablevision encrypted the basic service tier in New York City. *Cablevision Waiver*, 25 FCC Rcd at 136, ¶ 5; *See* Appendix A (adding §§ 76.630(a)(1)(ii)-(iv)). These transitional periods appear to have worked well, and commenters suggested that they will provide adequate consumer protection, so we adopt them here. Comcast Comments at 16; Samuel Biller Reply at 2; Letter from Carlos Hernandez, Mayor, City of Hialeah, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 11-169 (Dec. 7, 2011).

because some consumers may own third-party provided IP-enabled devices that do not have the ability to decrypt cable signals.⁸⁵ Therefore, these commenters call for the Commission to reject the proposed rule, or adopt special measures to mitigate disruption to consumers that use those third-party devices.⁸⁶ Specifically, these parties complain that existing cable set-top boxes and DTAs are not compatible with IP-enabled devices because they do not output signals in a manner that third-party-provided IP-enabled devices can access.⁸⁷ Accordingly, such devices would not be compatible with the operator's free equipment offering – *i.e.*, there would be no connection by which such devices could access the basic tier channels—thus rendering such devices useless if a cable operator chooses to encrypt the basic tier.⁸⁸ Commenters assert that such devices were purchased or manufactured on the expectation that unencrypted basic service tier QAM signals would continue to be available from cable operators. The record indicates that at least four companies have developed products that rely on customers' ability to access clear-QAM signals, and that a relatively small number of consumers have purchased these devices for this capability.⁸⁹ As explained above, however, we anticipate the impact of encryption of the basic tier on the public at large will be minimal because the record indicates that only a small number of consumers rely on clear-QAM devices to access the basic tier.⁹⁰ And, the record further indicates that

⁸⁵ See Boxee Dec. 21 Ex Parte at 1-3; Hauppauge Ex Parte at 1-2; Shawn Foy Ex Parte (filed Dec. 27, 2011). These IP-enabled devices are equipment that consumers use as set-top boxes to access the basic tier signals as well as permit consumers to view video programming offered over the Internet on their television sets. See *e.g.*, Hauppauge Ex Parte at 1-2; <http://www.boxee.tv/live>. These devices cannot decrypt signals because they are not CableCARD compatible. See Boxee Dec. 21 Ex Parte at 2.

⁸⁶ Letter from Melissa Marks, General Counsel, Boxee Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, at 2-6 (filed July 30, 2012) (“Boxee July 30 Ex Parte”); Shawn Foy Ex Parte (filed Dec. 27, 2011).

⁸⁷ Boxee Dec. 21 Ex Parte at 2-3 (“The interim relief set forth in the NPRM also fails to sufficiently address Boxee’s likely harm, because, as currently proposed, the rule does not require that interim set-top boxes be compatible with Boxee’s device. . . a set-top box that can ‘descramble or decrypt the basic service tier signals’ does not necessarily require that the output of that set-top box be a QAM stream, as it would need to be in order to be compatible with the Boxee device.”).

⁸⁸ See Boxee Dec. 21 Ex Parte at 3-4 (filed Dec. 21, 2011); Joseph Fowble Comments, MB Docket No. 09-168, at 1 (filed Oct. 21, 2009). *But see* Letter from Neal M. Goldberg, Vice President and General Counsel, National Cable and Telecommunications Association, to Marlene H. Dortch, Secretary, Federal Communications Commission at 1-2 (Dec. 29, 2011) (highlighting that encryption would not render these devices worthless because the broadcast signals carried on the basic service tier are available over the air and are accessible to consumers with the use of an antenna).

⁸⁹ See Hauppauge Ex Parte at 1-2; Boxee Dec. 21 Ex Parte at 1-3; Letter from Mark Ely, President & CEO, Really Simple Software, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, at 1 (Feb. 13, 2012); Elgato Comments, MB Docket No. 09-168, at 2 (filed Oct. 15, 2009). These commenters state that between 30 and 40 percent of their customers use the devices to access clear QAM signals (the others use the devices to access over-the-air signals or analog cable signals). Hauppauge Ex Parte at 1-2; Letter from Melissa Marks, General Counsel, Boxee Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission at Attachment at 10 (March 19, 2012). According to the most recent available information from Boxee, they have sold 200,000 devices, but not all of those devices are equipped with the LiveTV dongle, which is the peripheral needed to access clear-QAM on a Boxee box. Mark Hachman, *200,000 Boxee Boxes Sold? ‘Outdated’ Number, Boxee Says*, PCMAG.COM, April 13, 2012, <http://www.pcmag.com/article2/0,2817,2403017,00.asp> (visited August 14, 2012) (reporting that “Apple TV or Roku set-tops”—devices without clear-QAM tuners—“are the only connected devices in 1 percent of all households.”).

⁹⁰ See *supra* n.11, indicating that only one-tenth of one percent of cable subscribers in Cablevision’s New York City systems took advantage of the consumer-protection conditions of the *Cablevision Waiver*.

subscribers who use IP-enabled clear-QAM devices that would be incompatible with the free equipment offerings by cable operators represent an even smaller subset of clear-QAM users.⁹¹

20. To mitigate any harm to the small group of consumers that may use such devices, NCTA's six largest incumbent cable members—serving 86 percent of all cable subscribers—have committed to adopt, prior to encrypting, a solution that would provide basic service tier access to third-party provided IP-enabled clear QAM devices.⁹² Pursuant to this commitment, these six cable operators will make basic service tier channels available either via connection from operator-supplied equipment or by providing access to the operator's security technology. Specifically, these cable operators have proposed to either (i) provide a converter box with “standard home networking capability” that can provide IP-enabled clear QAM devices access to basic service tier channels on the same terms proposed in the *Encryption NPRM* (“Option 1”),⁹³ or (ii) enable IP-enabled clear QAM devices to access basic service tier channels without any additional hardware through the use of commercially available software upgrades (“Option 2”).⁹⁴ NCTA proposed to sunset these commitments three years after we adopt this Order unless the Commission extends them.⁹⁵ Boxee and CEA argue that these commitments do not sufficiently support the operation of IP-enabled clear QAM devices. Instead, they advocate that all cable operators should be required to make the basic service tier available to IP-enabled devices without additional hardware.⁹⁶

⁹¹ See *supra* n.89; Shawn Foy Ex Parte (filed Dec. 27, 2011) (explaining that he owns four clear-QAM television sets, which would be compatible with decryption equipment, and one clear-QAM network tuner device, which would not).

⁹² Letter from Michael K. Powell, President and Chief Executive Officer, National Cable and Telecommunications Association, to Julius Genachowski, Chairman, Federal Communications Commission (filed July 25, 2012) (“NCTA Commitment Letter”). Those operators are Comcast, Time Warner Cable, Cox, Charter, Cablevision, and Bright House. See Top 25 Multichannel Video Programming Distributors, <http://www.ncta.com/Stats/TopMSOs.aspx/> (visited Aug. 14, 2012).

⁹³ NCTA's commitment states: “Cable Operators shall be permitted to encrypt their Basic Service Tiers in Encrypted Systems at such time as they offer to basic tier subscribers with retail IP-enabled Clear QAM devices in such systems an Operator-supplied set-top box, digital transport adapter (‘DTA’) or other Operator-supplied equipment with standard home networking capability (e.g., equipment with a DLNA-enabled Ethernet connector or Wi-Fi capability). Such Operator-supplied equipment will be offered pursuant to the terms of the Transitional Equipment Measures regarding notice to consumers and availability of equipment at no charge for a limited period of time. In Encrypted Systems that utilize DTA security, Cable Operators will support the delivery of the Basic Service Tier to an IP-enabled Clear QAM Device with embedded DTA security (‘Retail DTA’) without the need for Operator-supplied equipment. Such Cable Operators will have no duty to offer Operator-supplied equipment to a customer with a Retail DTA in such Encrypted Systems.” NCTA Commitment Letter at 2.

⁹⁴ NCTA's commitment states: “Subject to the procedure described in this paragraph, Cable Operators shall be permitted to encrypt their Basic Service Tiers in Encrypted Systems in which they enable IP-enabled Clear QAM Devices to access the Basic Service Tier without the need for an Operator-supplied set-top box, DTA, or CableCARD. In enabling such access, such Cable Operators shall use commercially available security technology that is licensable on a non-discriminatory basis to manufacturers of such retail devices. Any Cable Operator that pursues this option agrees to make publicly available the requirements necessary (including any authentication processes) for such a device to access the Basic Service Tier and submit a copy of such requirements to the Commission. Cable Operators who elect this option shall be permitted to encrypt their Basic Service Tiers three months after submitting such requirements to the Commission.” NCTA Commitment Letter at 2.

⁹⁵ *Id.*

⁹⁶ Boxee July 30 Ex Parte at 2-6; Letter from Julie M. Kearney, Vice President, Regulatory Affairs, Consumer Electronics Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, at 2-4 (filed July 31, 2012) (“CEA July 31 Ex Parte”). Boxee advocates an approach that would guarantee that by July 2013 Boxee devices can access basic tier signals without additional hardware. Boxee July 30 Ex Parte at Appendix A.

CEA further encourages the Commission not to sunset the commitments after three years.⁹⁷ The AllVid Alliance suggests that the Commission initiate a Notice of Proposed Rulemaking seeking comment on “a nationally-portable common IP-based interface from MVPD services to consumer devices.”⁹⁸

21. We believe that the commitments from the six largest incumbent cable operators will be sufficient to address the compatibility issue concerning IP-enabled devices and achieve the objectives of Section 624A of the Act – *i.e.*, to ensure compatibility between cable service and consumer electronics equipment.⁹⁹ We do not extend the additional equipment requirement to smaller cable operators because we do not believe it is necessary at this time.¹⁰⁰ As noted above, based on the current record, only a small number of consumers rely on IP-enabled devices to access the basic tier and thus we expect this particular compatibility problem to be extremely limited in scope.¹⁰¹ Because the six largest incumbent cable operators subject to the rule serve 86 percent of all cable subscribers nationwide, we expect most consumers that use such devices will have ready access to the necessary equipment.¹⁰² Moreover, large cable operators generally dictate equipment features to manufacturers and commonly get priority in delivery of that equipment.¹⁰³ We anticipate that the large operators’ demand for this equipment eventually will lead all equipment to include this functionality in the marketplace, and thus the equipment small cable operators provide will eventually include the IP functionality as well, regardless whether they specify this particular feature.¹⁰⁴ Nonetheless, we may revisit this issue if the equipment market does not develop as expected or if we find that small cable operators do not make their service compatible with these consumer devices.

22. Contrary to Boxee’s argument, nothing in Section 624A requires that consumer equipment compatibility be achieved by means of a hardware-free solution.¹⁰⁵ Under the equipment measure we adopt today, the vast majority of consumers will be able to access service that is encrypted using a commercially available security technology or via equipment with standard home-networking capability in much the same way they do today. In fact, if this standard home-networking capability is connected to a wireless home network, the consumer experience could improve because consumers will be able to

⁹⁷ CEA July 31 Ex Parte at 2.

⁹⁸ Letter from Robert S. Schwartz, Counsel to the AllVid Tech Company Alliance, to Marlene H. Dortch, Secretary, Federal Communications Commission at 1-2 (Aug. 8, 2012).

⁹⁹ 47 U.S.C. §544a; *see infra* ¶¶ 34-36.

¹⁰⁰ *See U.S. Cellular Corp. v. FCC*, 254 F.3d 78, 86 (D.C. Cir. 2001) (“agencies need not address all problems in one fell swoop”) (citations and internal quotation marks omitted); *Personal Watercraft Industry Assoc. v. Dept. of Commerce*, 48 F.3d 540, 544 (D.C. Cir. 1995) (“An agency does not have to ‘make progress on every front before it can make progress on any front.’”) (quoting *United States v. Edge Broadcasting Co.*, 509 U.S. 418, 434 (1993)); *National Association of Broadcasters v. FCC*, 740 F.2d 1190, 1207 (D.C. Cir. 1984) (“[A]gencies, while entitled to less deference than Congress, nonetheless need not deal in one fell swoop with the entire breadth of a novel development; instead, ‘reform may take place one step at a time, addressing itself to the phase of the problem which seems most acute to the [regulatory] mind.’”) (citations and internal quotation marks omitted, alteration in original).

¹⁰¹ *See supra* n.89.

¹⁰² *See* <http://www.ncta.com/StatsGroup/OperatingMetric.aspx>, <http://www.ncta.com/Stats/TopMSOs.aspx> (stating that the six largest incumbent cable operators serve 49.38 million of the 57.3 million cable video customers in the United States).

¹⁰³ Mike Robuck, *Technicolor tops 10 million DTAs sold in North America*, CED MAGAZINE, Jan. 31, 2012, available at <http://www.cedmagazine.com/news/2012/01/technicolor-tops-10-million-dtas-sold-in-north-america>. (“Comcast set the table when it came to the SD DTA product specifications, and has started to roll out HD DTAs.”).

¹⁰⁴ *Id.*

¹⁰⁵ 47 U.S.C. § 544a.

access basic service tier channels without physically connecting a device to a coaxial plug from the wall.¹⁰⁶ Thus, mandating a hardware-free solution is not necessary to protect consumers in the context of the instant proceeding.¹⁰⁷

23. We adopt these commitments as required preconditions to encrypting by the top six incumbent cable operators with slight modifications and clarifications. These conditions will automatically sunset three years from the release date of this Order unless the Media Bureau (“Bureau”) determines prior to this date that the IP-enabled device protections remain necessary to protect consumers.¹⁰⁸ We believe that a future review of these rules is warranted because the market for these IP-based devices is nascent and it is unclear whether consumer demand for this equipment will flourish.¹⁰⁹ Accordingly, we delegate authority to the Bureau to initiate a review two years after the release of this Order to decide whether these IP-enabled device protections remain necessary to protect consumers or whether it is appropriate to sunset the IP-enabled device protections.¹¹⁰ If the Bureau does not release an order extending these protections within three years from the release date of this Order, then the consumer protection measures concerning IP-enabled devices detailed in paragraph 20 will no longer apply to the top-six cable operators for purposes of encryption of the basic service tier. In deciding whether the sunset is appropriate, the Bureau shall consider the costs to cable operators and the benefits to consumers, whether competitive services are available, regulatory parity between cable and other MVPDs, the state of technology and the marketplace, and cable operators’ efforts to meet these commitments and ensure compatibility.¹¹¹ The Bureau shall also consider whether the IP-enabled device protections should be extended to small cable operators.

24. Second, we add some clarifying language to address Boxee and CEA’s concerns that cable operators could use licenses to limit retail device manufacturers from building compatible devices.¹¹² Any license terms that cable operators require for the “standard home networking capability”¹¹³ used to offer access to the basic service tier in Option 1 and the “requirements necessary (including any

¹⁰⁶ We note that the cable industry’s high-speed data services require hardware—cable modems—which IP-enabled devices rely on to receive high-speed Internet access service. Therefore, we believe that most consumers are comfortable with using hardware necessary to receive service.

¹⁰⁷ Nor do we believe that it is appropriate in this Order to address device compatibility issues related to all MVPDs as the AllVid Tech Company Alliance suggests. Letter from Robert S. Schwartz, Counsel to the AllVid Tech Company Alliance, to Marlene H. Dortch, Secretary, Federal Communications Commission at 1-3 (Aug. 8, 2012); [see 47 U.S.C. § 544a, *Video Device Competition; Implementation Of Section 304 Of The Telecommunications Act Of 1996: Commercial Availability Of Navigation Devices; Compatibility Between Cable Systems And Consumer Electronics Equipment*, 25 FCC Rcd 4275 (2010).

¹⁰⁸ See CEA July 31 Ex Parte at 2 (arguing that sunset of the IP-enabled device protections “makes the options unworkable for competitive device entry”). The Bureau will consider the effect that these rules have on the market for IP-enabled devices when it decides whether to sunset the consumer protection measures concerning IP-enabled devices.

¹⁰⁹ Unlike the transitional equipment requirements applicable to all cable operators that address situations where the customer has not been using equipment to access the basic service tier signals, the requirements applicable to the top six incumbent cable providers are intended to address situations where the customer has been accessing the basic tier signals using a third-party provided box that will be rendered useless absent the conditions we adopt today.

¹¹⁰ As provided under our rules, any entity that wishes to challenge the Bureau’s decision regarding the sunset will have the opportunity to file an Application for Review by the full Commission. See 47 C.F.R. § 1.115.

¹¹¹ See NCTA Commitment Letter at 2.

¹¹² Boxee July 30 Ex Parte at 3-4; CEA July 31 Ex Parte at 2.

¹¹³ This term refers to the methods used to connect video devices throughout a home (*i.e.*, the physical connections between those devices) and the protocols necessary to send videos to and from those devices.

authentication processes)” in Option 2 must be made available on a good faith basis.¹¹⁴ In adopting this “good faith” licensing requirement, we intentionally do not specify any particular technology or technology licensing model (*e.g.*, we do not require or specify “fair, reasonable, and non-discriminatory” licensing, as that term has been interpreted in other contexts, as urged by Boxee and CEA).¹¹⁵ Third, we require the operators that choose to offer access to the basic service tier using Option 1 to “publicly disclose the DLNA profile or other protocol that is being used for the home-networking capability on such operator-supplied equipment.” Such a requirement is necessary to ensure that third-party manufacturers have the information necessary to build a device that works with cable-provided equipment.¹¹⁶ We also remind cable operators that Section 76.640(b)(4)(iii) of our rules, which goes into effect in December of this year, requires all high definition set-top boxes (except for one-way, non-recording set-top boxes) to include an IP-compatible output based on an open industry standard that provides for audiovisual communications including service discovery, video transport, and remote control command pass-through standards for home networking.¹¹⁷ We believe that these additional consumer protection measures will ease the transition to encrypted service for the vast majority of the small subset of customers that rely on third-party provided IP-enabled devices to access the basic service tier.

25. *Other Issues.* Public Knowledge and Media Access Project state in their comments that there have been no complaints from customers in Cablevision’s encrypted systems about “hidden fees” related to the free device offers, and they anticipate that cable operators “intend to act in good faith.”¹¹⁸ Out of an abundance of caution, however, they suggest we affirmatively state that cable operators may not impose service fees (such as “digital access fees” or “outlet fees”) in lieu of rental fees for the free devices.¹¹⁹ Consistent with Public Knowledge and Media Access Project’s suggestion, we clarify that

¹¹⁴ For example, it would be bad faith for a cable operator to charge an excessive amount for a third-party to license the technology necessary to access these signals. *See* CEA July 31 Ex Parte at 2. This good faith requirement applies only to the terms that cable operators impose. This limit does not apply to licensing terms that are not subject to cable operator control—for example, patent licenses for specific codecs. Because CableLabs’ board of directors consists largely of cable executives, this limit does apply to CableLabs’ licensing terms. *See* About CableLabs: Board of Directors, <http://www.cablelabs.com/about/board/> (last visited Aug. 10, 2012). We note that the NCTA letter already reflects a commitment by any of the six largest cable operators who elect to use Option 2 to enable access to the basic service tier using “security technology that is licensable on a non-discriminatory basis.” NCTA Commitment Letter at 2.

¹¹⁵ *See* Letter from Melissa Marks, General Counsel, Boxee Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission at 1 (Aug. 3, 2012); CEA July 31 Ex Parte at 3.

¹¹⁶ NCTA does not object to this requirement. Letter from Rick Chessen, Senior Vice President, Law & Regulatory Policy, National Cable and Telecommunications Association, to Marlene H. Dortch, Secretary, Federal Communications Commission (August 13, 2012).

¹¹⁷ *See* 47 C.F.R. § 76.640(b)(4)(iii) (requiring that as of December 1, 2012, “cable-operator-provided high definition set-top boxes, except unidirectional set-top boxes without recording functionality, shall comply with an open industry standard that provides for audiovisual communications including service discovery, video transport, and remote control command pass-through standards for home networking.”); CEA July 31 Ex Parte at 2-4. The Commission adopted this rule “to ensure that video made available over these interfaces can be received and displayed by devices manufactured by unaffiliated manufacturers (*i.e.*, manufacturers not owned by or under license of the leased set-top box vendor or cable operator) and sold at retail,” stating that it “is important to define a baseline of functionality to ensure that consumers who network their devices and device manufacturers can rely on networked devices’ ability to communicate with leased set-top boxes.” *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices Compatibility Between Cable Systems and Consumer Electronics Equipment*, 25 FCC Rcd 14657, 14677-9, ¶¶ 39, 44 (2010).

¹¹⁸ PK and MAP Comments at 9.

¹¹⁹ PK and MAP Comments at 3, 8-11. *See also* Eric Kotz Comments at 1.

boxes provided by cable operators that choose to encrypt the basic service tier must be provided without any additional service charges related to the equipment.

26. Public Knowledge and Media Access Project also suggest that we tie the low-income condition to Lifeline/Linkup eligibility because Medicaid eligibility can vary from state to state.¹²⁰ We reject that suggestion as unnecessary. As several commenters point out, Medicaid eligibility presents an easily verifiable, bright-line test, and is less likely to cause confusion among subscribers and cable customer service representatives.¹²¹

27. We also reject calls from some commenters to require free equipment in perpetuity for existing subscribers, and not to limit free boxes to existing subscribers.¹²² The consumer protection measures we adopt are intended to mitigate the disruption that may be experienced by current cable subscribers. We do not agree that free equipment is necessary for new subscribers: given the movement to digital services, many subscribers have become accustomed to leasing set-top devices, and that trend seems likely to continue.¹²³ Furthermore, we agree with NCTA that unnecessarily burdensome conditions such as free devices for all new subscribers could discourage cable operators from encrypting and prevent the public from realizing the benefits that stem from cable operators' ability to remotely activate and deactivate service which benefits most subscribers.¹²⁴ Accordingly, we do not condition this rule change on cable operators' supplying free devices in perpetuity to existing subscribers or to new subscribers.¹²⁵

28. Certain commenters express concern about the impact that basic service tier encryption could have on institutional subscribers and schools in particular.¹²⁶ They suggest that the Commission extend the free-device consumer protections to institutional subscribers to prevent the rule change from placing a financial burden on them.¹²⁷ Cable operators, however, suggest that these commenters conflate encryption with digitization, and we agree.¹²⁸ As cable operators transition to all-digital service, these

¹²⁰ PK and MAP Comments 2-3, 6-8. The Lifeline program provides discounts on monthly telephone charges, and Link Up provides a discount on the cost of commencing telephone service for qualifying low-income households. Under federal guidelines, telephone subscribers who have an income at or below 135% of the federal poverty guidelines or participate in Medicaid, Food Stamps, Supplemental Security Income, Federal Public Housing Assistance, Low-Income Home energy Assistance Program, Temporary Assistance to Needy Families, or the National School Lunch Program's Free Lunch Program are eligible, but eligibility criteria can vary by state. *See* Lifeline and Link Up: Affordable Telephone Service for Income-Eligible Consumers, <http://www.fcc.gov/guides/lifeline-and-link-affordable-telephone-service-income-eligible-consumers> (visited January 9, 2012).

¹²¹ *See* Cablevision Reply at 10, Comcast Reply at 6, NCTA Reply at 3.

¹²² *See, e.g.*, New Jersey Division of Rate Counsel Comments at 5; Montgomery County, MD Comments at 4-6.

¹²³ *See* BendBroadband Comments at 4; Cablevision Comments at 4-5 ("The trend towards required devices for viewing broadcast programming was cemented during the digital [broadcast] transition.").

¹²⁴ NCTA Reply at 3, 13-14; *see supra* ¶¶ 12-13 discussing the public interest benefits of remote activation and deactivation.

¹²⁵ Although we do not require cable operators to make these device offers available in perpetuity, cable operators are free to do so and, in any event, we expect them to work with their subscribers to provide as easy a transition as possible.

¹²⁶ Alliance for Community Media Comments at 2; City of Boston Reply at 1-2; Montgomery County, MD Comments at 4; NATOA Reply at 4; New Jersey Division of Rate Counsel Reply at 4-6. Commenters use the term "institutional subscribers" to refer to subscribers such as schools and public buildings. *See* Alliance for Community Media Comments at 2.

¹²⁷ *Id.*

¹²⁸ *See* Comcast Reply at 10; Cablevision Reply at 8; NCTA Reply at 13-14. *See also supra*, n.80.

institutional subscribers will need devices to convert digital signals to analog regardless of whether the service is encrypted unless the institutional subscribers use television sets with clear-QAM tuners and only use those televisions to access the basic service tier.¹²⁹ Furthermore, Comcast argues that cable operators establish agreements with local institutions on a case-by-case basis, and that each franchising authority negotiates consumer protection measures to meet its needs.¹³⁰ We are persuaded that it is unnecessary to adopt consumer-protection measures with respect to institutional subscribers, because we expect that cable operators will continue to work with local institutions – and may be required to do so by franchising authorities – to ensure that the institutions’ needs will be met. We emphasize that our rules are not intended to limit or preempt existing, renegotiated, or future franchise agreements that provide institutional subscribers more equipment on different terms than our rules require for residential subscribers. We expect that cable operators will work closely with local franchising authorities and institutions to ensure that any disruption institutional subscribers experience as a result of encryption will be minimized.

29. ACA and BendBroadband express concern about the effect that the conditions will have on small cable operators.¹³¹ We agree with ACA and BendBroadband that in some instances the benefits of encryption may be outweighed by the burdens of administrative upgrades to account for the new billing procedures needed to offer free devices for a limited period of time. We note, however, that the decision to encrypt the basic service tier will be a voluntary decision made at the sole discretion of the cable operator under the rules we adopt here. Thus, each cable operator may use its business judgment to decide whether, and when, the benefits of encryption outweigh the costs of upgrading billing software and providing equipment to its subscribers to ease the transition to encrypted service.¹³²

30. *Notification-Requirements.* Based on the record, we believe that notification requirements are also necessary to protect consumers. Therefore, we will require cable operators to notify their subscribers about the planned encryption and the device offers at least 30 days before the date encryption of the basic tier commences. We will also require cable operators to notify their subscribers at least 30 days, but no more than 60 days, before the end of the free device transitional period. These notifications are necessary to make the device-based consumer protection measures meaningful to consumers; the measures would be meaningless if affected consumers were not made aware of the offers.

31. NCTA proposed that our rules require cable operators to notify their subscribers about encryption and free device offers at least 30 days prior to the date encryption of the basic service tier commences.¹³³ Several commenters supported NCTA’s proposal,¹³⁴ and we agree that it is important to identify when cable operators must notify their subscribers about encryption. Therefore, we will require cable operators to notify their subscribers that they will encrypt at least 30 days before the date encryption

¹²⁹ *Id.* In its comments, Montgomery County, MD indicates that its schools rely on unencrypted analog service, rather than digital service: “the County’s schools use a central media room to distribute an unscrambled analog video lineup throughout the school.” Montgomery County, MD Comments at 4.

¹³⁰ Comcast Reply at 8-9.

¹³¹ BendBroadband Comments at 6; ACA Comments at 6-7; ACA Reply at 3-10.

¹³² In June, the Commission relied on the prevalence of low-cost equipment as a reason for allowing the viewability rule to sunset. See *Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission’s Rules*, 27 FCC Rcd 6529, 6534, ¶ 14 (2012) (“[L]ow-functionality/low cost digital equipment is now readily available as an option to cable consumers.”). Because low-cost equipment is now available, the cost of the consumer protections we adopt in this Order should be minimal.

¹³³ NCTA Comments at 12.

¹³⁴ See Cablevision Comments at 15; Comcast Reply at 5; TWC Reply at 7, n.28.

of the basic service tier commences, at which time they must also include information about the transitional device requirements set forth in Section 76.630.¹³⁵ The notice must state:

On (DATE), (NAME OF CABLE OPERATOR) will start encrypting (INSERT NAME OF CABLE BASIC SERVICE TIER OFFERING) on your cable system. If you have a set-top box, digital transport adapter (DTA), or a retail CableCARD device connected to each of your TVs, you will be unaffected by this change. However, if you are currently receiving (INSERT NAME OF CABLE BASIC SERVICE TIER OFFERING) on any TV without equipment supplied by (NAME OF CABLE OPERATOR), you will lose the ability to view any channels on that TV.

If you are affected, you should contact (NAME OF CABLE OPERATOR) to arrange for the equipment you need to continue receiving your services. In such case, you are entitled to receive equipment at no additional charge or service fee for a limited period of time. The number and type of devices you are entitled to receive and for how long will vary depending on your situation. If you are a (INSERT NAME OF CABLE BASIC SERVICE TIER OFFERING) customer and receive the service on your TV without (NAME OF CABLE OPERATOR)-supplied equipment, you are entitled to up to two devices for two years (five years if you also receive Medicaid). If you subscribe to a higher level of service and receive (INSERT NAME OF CABLE BASIC SERVICE TIER OFFERING) on a secondary TV without (NAME OF CABLE OPERATOR)-supplied equipment, you are entitled to one device for one year.

You can learn more about this equipment offer and eligibility at (WEBPAGE ADDRESS) or by calling (PHONE NUMBER). To qualify for any equipment at no additional charge or service fee, you must request the equipment between (DATE THAT IS 30 DAYS BEFORE ENCRYPTION) and (DATE THAT IS 120 DAYS AFTER ENCRYPTION) and satisfy all other eligibility requirements.

We believe that 30 days' notice will provide a reasonable opportunity for affected consumers to avail themselves of free device offers in advance of basic service tier encryption without unduly burdening cable operators. In addition, at least 30 days, but no more than 60 days, before the end of the free device transitional period, a cable operator that encrypts must notify subscribers that have taken advantage of the transitional period that the period is ending as follows:

You currently receive equipment necessary to descramble or decrypt the basic service tier signals (either a set-top box or CableCARD) free of charge. Effective with the (MONTH/YEAR) billing cycle, (NAME OF CABLE OPERATOR) will begin charging you for the equipment you received to access (INSERT NAME OF CABLE BASIC SERVICE TIER OFFERING) when (NAME OF CABLE OPERATOR) started encrypting those channels on your cable system. The monthly charge for the (TYPE OF DEVICE) will be (AMOUNT OF CHARGE).

¹³⁵ See Appendix A (adding §§ 76.630(a)(1)(ii)-(iv)). This requirement is consistent with the condition that the Media Bureau adopted in the *Cablevision Waiver*. See Letter from Howard Symons, Counsel for Cablevision, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 09-168 (Jan. 7, 2010).

While our rule prescribes the language that cable operators must use to notify their subscribers about encryption and the device-based protection measures, we leave open the option for cable operators to supplement this notice as they see fit. We will not require the six largest incumbent cable operators to provide special notice to their subscribers about the availability of IP-enabled device compatibility, though they must comply with existing notice requirements.¹³⁶ Third-party IP-enabled device manufacturers have an economic incentive to ensure their customers are aware of the functions and features of their devices, *e.g.*, provide notice to their customers in marketing materials about the need to obtain IP-enabled equipment from their cable operator and the special equipment the six largest incumbent cable operators are required to offer their subscribers under Commission rules.¹³⁷

32. Public Knowledge and Media Access Project proposed that we require operators to notify subscribers when their free device period is ending on each monthly bill for the three months preceding the end of the transition period.¹³⁸ We agree that preventing “bill shock” is important, and Section 76.1603(d) of our rules requires cable operators to provide written notice of any increase in price to be charged for equipment necessary to access the basic service tier at least 30 days before the increase is effective.¹³⁹ We do not believe that the three notices that Public Knowledge and Media Access Project propose are necessary. But we are concerned that cable operators could notify their subscribers too early in the transition period to render notification essentially meaningless.¹⁴⁰ Therefore, we believe it is important to define the window for notices more precisely so that affected subscribers are notified no more than 60 days before the end of the transitional free-device period. At that time, affected subscribers can determine the course that best suits their circumstances. Some subscribers may opt to continue their current level of service and pay for the additional equipment charges. Other subscribers may choose to reduce their level of service or terminate their existing cable service and pursue a competitive alternative that better meets their service needs and budgets.¹⁴¹

33. The New York City Department of Information Technology and Telecommunications (NYC DoITT) argues that, because Cablevision’s encryption of its New York City systems is nascent, the Commission cannot be sure of the long-term effects that basic service tier encryption may have.¹⁴²

¹³⁶ We believe that our existing rules provide cable subscribers with adequate notice: Section 76.1621(c) of the Commission’s rules requires operators to determine the specific equipment needed by individual subscribers on a case-by-case basis, and to make good faith efforts to provide subscribers with the types of special equipment needed to resolve their individual compatibility problems. 47 C.F.R. § 76.1621(c). In addition, Section 76.1622 requires operators to educate subscribers annually about compatibility issues. 47 C.F.R. § 76.1622.

¹³⁷ *See, e.g.*, <http://www.boxee.tv/live> (last visited Aug. 27, 2012), http://www.hauppauge.com/site/products/data_hvr2250.html (last visited Aug. 27, 2012), <http://www.elgato.com/elgato/na/mainmenu/products/EyeTV-Hybrid-10/product3.en.html> (last visited Aug. 27, 2012).

¹³⁸ PK and MAP Comments at 3, 8-11. *See also* Eric Kotz Comments at 1.

¹³⁹ 47 C.F.R. § 76.1603(d).

¹⁴⁰ For example, under our existing rule 76.1603(d), a cable operator might notify the subscriber of the increase in price as soon as the consumer receives the device—in the case of a Medicaid recipient, this would be 60 months before the price increase, which is technically more than 30 days before the charge increases.

¹⁴¹ Public Knowledge and Media Access Project also proposed that we require cable operators to provide subscribers with set-top boxes with the lowest rental fees by default. PK and MAP Comments at 11. We decline to dictate what type of set-top box cable operators must provide to comply with these requirements. Once subscribers are notified that the term of their free boxes is coming to an end they will be able to decide whether to continue leasing the box that was provided for free, select another box, or take some other action.

¹⁴² NYC DoITT Comments at 1-3

Therefore, NYC DoITT encourages the Commission to make this rule change temporary.¹⁴³ We agree that we cannot predict how our rule change will affect the cable industry and subscribers with absolute certainty. The information before us indicates, however, that this rule change will result in the substantial public interest benefits discussed above and that any additional burdens imposed on a limited number of subscribers will be tempered by the consumer protection measures adopted herein. The Commission will keep apprised of the consequences of the rule change and, if the situation develops differently than predicted, we can revisit the issue on our own initiative or in response to a petition for rulemaking.¹⁴⁴ In the future, we may seek information from the operators that have chosen to encrypt to ensure that the expected benefits are being achieved and any burdens to consumers are being minimized. However, nothing in the record persuades us that it is necessary to build a sunset into the rule.

D. Legal Basis

34. Section 624A of the Communications Act provides the Commission broad authority to make changes to our encryption rule and to impose the consumer-protection measures we adopt today.¹⁴⁵ Congress's objective in enacting Section 624A was to ensure compatibility between cable systems and consumer TV (receiving and recording) equipment, consistent with the need to prevent theft of cable service.¹⁴⁶ Section 624A(b)(2) directs 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."¹⁴⁷ Section 624A(d) directs the Commission to periodically review and modify regulations adopted pursuant to Section 624A "to reflect improvements and changes in cable systems, television receivers, video cassette recorders and similar technology."¹⁴⁸ The record suggests that to achieve the statutory goals of Section 624A a blanket ban on encryption is no longer necessary, and that changes in cable technology justify relaxing the rule for all-digital cable systems, provided consumer protection measures are addressed. As explained above, cable technology is markedly different than it was when the Commission first adopted the encryption prohibition set forth in Section 76.630.¹⁴⁹ For example, the transition to all-digital systems means that encryption of the basic service tier will permit remote activation and deactivation of cable service resulting in significant savings of time and resources for both cable operators and the vast majority of cable customers.¹⁵⁰ Furthermore, as discussed below, the CableCARD standard provides an avenue for consumers to purchase consumer electronics devices that are compatible with digital cable service, which achieves Congress' stated goal in Section 624A.¹⁵¹

¹⁴³ *Id.*

¹⁴⁴ 47 C.F.R. §§ 1.411, 1.401.

¹⁴⁵ 47 U.S.C. § 544a.

¹⁴⁶ 47 U.S.C. § 544a(a).

¹⁴⁷ 47 U.S.C. § 544a(b)(2).

¹⁴⁸ 47 U.S.C. 544a(d); BendBroadband Comments at 5; Comcast Comments at 17-18.

¹⁴⁹ *Compatibility Order*, 9 FCC Rcd at 1990, ¶ 50 (noting that at the time of adoption of the encryption prohibition, the basic service tier was nearly always unscrambled, theft of basic service was less of a problem than theft of other services, and it was beneficial to allow subscribers to access basic tier channels without using a descrambling set-top box).

¹⁵⁰ ACA Comments at 3; Comcast Comments at 4-6.

¹⁵¹ We note that Executive Order No. 13579 provides additional support for the rule change. Executive Order No. 13579 directs government agencies to review and modify rules that "may be outmoded, ineffective . . . or excessively burdensome." Exec. Order No. 13579, 76 Fed. Reg. 41,587 (July 11, 2011). In response to the Executive Order, the Commission explained that it identifies regulations ripe for retrospective analysis based on whether the regulation "(1) has been affected by changes in technology or new scientific research or changes in

(continued....)

35. Relaxing the encryption rule in this manner will not impede Section 624A's goal of compatibility between consumer electronics equipment and cable systems. The Commission has adopted a standard that allows for "plug and play"¹⁵² compatibility between consumer electronics devices and cable systems.¹⁵³ This standard provides a clear path for device manufacturers to follow if they wish to build devices that are compatible with digital cable systems and can access all linear digital cable services.¹⁵⁴ Montgomery County, Maryland argues that the CableCARD standard is not successful, and that the Commission should endeavor to relieve compatibility problems, rather than compound them.¹⁵⁵ According to Montgomery County, relaxing the encryption rule will lead to compatibility problems because consumers will no longer be able to use clear-QAM tuners on non-primary television sets.¹⁵⁶ However, the Commission has already adopted a solution for compatibility between consumer electronics equipment and digital cable: the CableCARD standard is intended to allow consumers to buy compatible retail devices to access all linear digital cable services as opposed to the basic-only service that clear-QAM tuners can access without additional equipment. Indeed, the Commission's cable-ready labeling rules prohibit device manufacturers from labeling their devices as "digital cable ready" unless they comply with the CableCARD standards. Thus, under our existing rules, manufacturers should not have indicated to consumers that devices could receive digital cable service unless those devices were, in fact, CableCARD-compatible.¹⁵⁷ Therefore, we disagree with Montgomery County's characterization that encryption will lead to an abundance of compatibility problems due to the rule changes adopted herein. Section 624A(c)(1)(B) expressly directs the Commission to consider "the costs and benefits to consumers of imposing compatibility requirements on cable operators."¹⁵⁸ As discussed above, the costs associated with a blanket encryption prohibition in all-digital systems greatly outweigh the anticipated benefits to consumers,¹⁵⁹ particularly in light of the consumer protection measures we are also adopting.¹⁶⁰

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market structure; (2) has a disproportionate or undue burden on particular entities, has caused unintended negative effects, or could result in greater net benefits to the public if modified; and (3) has been subject to frequent requests for waivers by affected stakeholders or been identified by the public as needing revision." FEDERAL COMMUNICATIONS COMMISSION, PRELIMINARY PLAN FOR RETROSPECTIVE ANALYSIS OF EXISTING RULES 7 (Nov. 7, 2011), *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2011/db1107/DOC-310874A1.pdf. We believe the rule change we adopt today helps meet these important objectives.

¹⁵² 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.

¹⁵³ *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 supra* ¶¶ 3-5.

¹⁵⁴ *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). In addition, the Commission has commenced an inquiry into a future standard for MVPD-compatibility, which would provide a system for manufacturers to build devices compatible with all MVPDs, without causing the challenges to system security and inconvenience to customers that the encryption ban creates. *See Video Device Competition; Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices; Compatibility between Cable Systems and Consumer Electronics Equipment*, 25 FCC Rcd 4275 (2010).

¹⁵⁵ Montgomery County, MD Comments at 8-9.

¹⁵⁶ *Id.* at 2-3.

¹⁵⁷ *See* 47 C.F.R. § 15.123.

¹⁵⁸ 47 U.S.C. § 544a(c)(1)(B).

¹⁵⁹ *See supra* ¶¶ 12-15.

¹⁶⁰ *See supra* ¶¶ 16-33.

Furthermore, in 2010, the Commission adopted changes to the CableCARD rules, including streamlined device approval procedures, a self-installation option, and a prohibition on price discrimination against CableCARD devices, that should increase the retail availability and the quality of experience for CableCARD devices and further increase compatibility between consumer electronics and cable service by ensuring that retail devices can access all linear digital cable services.¹⁶¹ Given these technological and rule changes, we conclude that a complete prohibition on basic service tier encryption in all-digital systems is no longer necessary to ensure compatibility between consumer electronics devices and cable service, provided certain consumer protection measures are satisfied.¹⁶²

36. We also conclude that the requirement in Section 623(b)(3)(A) of the Act to base any price or rate standards for equipment installation and leasing on actual cost does not bar the Commission from imposing the consumer protection measures set forth in Sections 76.630(a)(1)(ii)-(vi) of our new rules.¹⁶³ The commenters who addressed our legal authority agree that the consumer protection measures—which are adopted as a transitional measure and implicate a limited number of affected customers—do not run afoul of Section 623 of the Communications Act,¹⁶⁴ and we did not receive any comments claiming that the consumer protection measures, as structured, would violate 623. These measures are not being imposed as a regulation of equipment rates under Section 623. Rather, the consumer protection measures are being adopted pursuant to Section 624A(b)(2)'s broad grant of authority to the Commission to determine “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.”¹⁶⁵ We have determined that relaxing the encryption prohibition should be permitted for all-digital systems, provided the potential harm to affected consumers is minimized. Our new rule permits a cable operator to elect to abide by the encryption prohibition without having any obligation to offer subscribers equipment for a transitional period. It is only when a cable operator chooses to encrypt the basic service tier that it is required to comply with the requisite regulatory conditions (by providing set-top boxes at no cost to affected subscribers for a limited transitional period). Thus, this requirement is imposed as a condition of a cable operator's voluntary election to encrypt the basic service tier, and not as a rate regulation imposed under Section 623(b)(3)(A).

E. Waiver Requests

37. As mentioned in paragraph 5 above, the Commission has pending before it four petitions for waiver of the encryption ban.¹⁶⁶ These petitions have been pending for more than a year. Petitioners seek

¹⁶¹ *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices Compatibility Between Cable Systems and Consumer Electronics Equipment*, 25 FCC Rcd 14657 (2010).

¹⁶² CEA and the AllVid Tech Company Alliance filed comments suggesting that the Commission should only act on basic service tier encryption in the broader context of device compatibility and the AllVid proceeding and that the Commission must take steps to comply with Section 629 of the Act. AllVid Tech Company Alliance Comments at 2-3; CEA Comments at 10-12. We agree with CEA and the AllVid Tech Company Alliance that ensuring the effective implementation of Section 629 of the Act and continuing future device compatibility are important issues that the Commission must resolve. However, we agree with Cablevision that those important issues need not be resolved before revising the ban on encryption of the basic service tier. Cablevision Reply at 5.

¹⁶³ 47 U.S.C. § 543(b)(3)(A).

¹⁶⁴ See Cablevision Comments at 11 n.23; NCTA Comments at 12-14; see also TWC Reply at 10.

¹⁶⁵ 47 U.S.C. § 544a(b)(2).

¹⁶⁶ 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). None of these operators is one of the six

(continued....)

immediate relief, claiming that they face extraordinary theft of service.¹⁶⁷ We find good cause to grant these waiver requests effective upon release of this Order to prevent further delay. For the reasons set forth above, these waivers are conditioned upon the petitioners' complying with the consumer protection requirements discussed in this Order.

IV. CONCLUSION

38. We conclude that allowing cable operators to encrypt the basic service tier in all-digital systems will result in substantial, tangible benefits to both consumers and cable operators with minimal countervailing burdens on affected subscribers. We believe that the consumer-protection measures that we adopt will mitigate any burdens that encryption will have on the limited number of consumers that may be affected by the instant rule change.

V. PROCEDURAL MATTERS

39. *Paperwork Reduction Act Analysis.* The Report and Order in this document does not contain proposed information collection(s) subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13.¹⁶⁸ In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. § 3506(c)(4).

40. *Final Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act,¹⁶⁹ the Commission has prepared a Final Regulatory Flexibility Analysis ("FRFA") relating to this *Report and Order*. The FRFA is set forth in Appendix A.

41. *Congressional Review Act.* The Commission will send a copy of this *Third Report and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see 5 U.S.C. § 801(a)(1)(A).

42. *Additional Information.* For additional information on this proceeding, contact Steven Broecker, Steven.Broecker@fcc.gov, or Brendan Murray, Brendan.Murray@fcc.gov, of the Media Bureau, Policy Division, (202) 418-2120.

43. For additional information concerning the information collection(s) contained in this document, contact Cathy Williams at (202) 418-2918, or via the Internet at PRA@fcc.gov.

VI. ORDERING CLAUSES

44. Accordingly, **IT IS ORDERED** that, pursuant to the authority contained in Sections 1, 4(i), 4(j), 303(r), 601, and 624A of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 154(j), 303(r), 521, and 544a, this Report and Order **IS ADOPTED**.

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largest incumbent cable operators; therefore, they are not subject to the IP-enabled device conditions we impose above.

¹⁶⁷ Inter Mountain Cable Inc.'s Request for Waiver of Section 76.630(a) of the Commission's Rules, CSR-8483-Z at 7-13 (filed April 13, 2011); *RCN Request* at 2-5; Coaxial Cable TV's Request for Waiver of Section 76.630(a) of the Commission's Rules, CSR-8334-Z at 3-4 (filed April 13, 2010); Mikrotec CATV LLC's Request for Waiver of Section 76.630(a) of the Commission's Rules, CSR-8528-Z at 5-9 (filed Sept. 7, 2011).

¹⁶⁸ The proposed notification requirements do not qualify as information collections under the PRA. 5 C.F.R. § 1320.3(e)(2).

¹⁶⁹ See 5 U.S.C. § 604.

45. **IT IS FURTHER ORDERED** that, pursuant to the authority contained in Sections 1, 4(i), 4(j), 303(r), 601, and 624A of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 154(j), 303(r), 521, and 544a, Part 76 of the Commission's rules **IS AMENDED** as set forth in Appendix A, effective 30 days after publication in the Federal Register. It is our intention that all of the rule changes adopted in this order are interdependent and inseparable and that if any provision of the rules, or the application thereof to any person or circumstance, are held to be unlawful or invalid, the remaining rule changes adopted herein shall not be effective.

46. **IT IS FURTHER ORDERED** that, pursuant to Section 1.3 of the Commission's rules, 47 C.F.R. § 1.3, the requests for waiver of Section 76.630(a) of the Commission's rules, 47 C.F.R. § 76.630(a), filed by RCN Corporation, Mikrotec CATV, LLC, Inter Mountain Cable, Inc., and Coaxial Cable TV **ARE GRANTED**, to the extent described herein and conditioned as set forth above.

47. **IT IS FURTHER ORDERED** that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, **SHALL SEND** a copy of this Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

48. **IT IS FURTHER ORDERED** that the Commission **SHALL SEND** a copy of this Report and Order in a report to be sent to Congress and the General Accounting Office pursuant to the Congressional Review Act, see 5 U.S.C. § 801(a)(1)(A).

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Final Rules

Part 76 of Title 47 of the Code of Federal Regulations will be amended as follows:

I. SUBPART K – TECHNICAL STANDARDS

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 **delivered to a subscriber** on the basic service tier.

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

(i) no encrypted signals are carried using the NTSC system; and

(ii) the cable system operator offers to its existing subscribers who subscribe only to the basic service tier without use of 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 television sets without charge or service fee for two years from the date encryption of the basic service tier commences; and

(iii) the cable system operator offers to its existing subscribers who subscribe to a level of service above "basic only" but use a digital television or other device with a clear-QAM tuner to receive only the basic service tier without use of 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 one television set without charge or service fee for one year from the date encryption of the basic service tier commences; and

(iv) the cable system operator offers to its existing subscribers who receive Medicaid and also subscribe only to the basic service tier without use of 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 television sets without charge or service fee for five years from the date encryption of the basic service tier commences;

(v) the cable system operator notifies its existing subscribers of the availability of the offers described in subsections (ii) through (iv) at least thirty days prior to the date encryption of the basic service tier commences and makes the offers available for at least thirty days prior to and one hundred and twenty days after the date encryption of the

basic service tier commences. The notification to subscribers must state:

On (DATE), (NAME OF CABLE OPERATOR) will start encrypting (INSERT NAME OF CABLE BASIC SERVICE TIER OFFERING) on your cable system. If you have a set-top box, digital transport adapter (DTA), or a retail CableCARD device connected to each of your TVs, you will be unaffected by this change. However, if you are currently receiving (INSERT NAME OF CABLE BASIC SERVICE TIER OFFERING) on any TV without equipment supplied by (NAME OF CABLE OPERATOR), you will lose the ability to view any channels on that TV.

If you are affected, you should contact (NAME OF CABLE OPERATOR) to arrange for the equipment you need to continue receiving your services. In such case, you are entitled to receive equipment at no additional charge or service fee for a limited period of time. The number and type of devices you are entitled to receive and for how long will vary depending on your situation. If you are a (INSERT NAME OF CABLE BASIC SERVICE TIER OFFERING) customer and receive the service on your TV without (NAME OF CABLE OPERATOR)-supplied equipment, you are entitled to up to two devices for two years (five years if you also receive Medicaid). If you subscribe to a higher level of service and receive (INSERT NAME OF CABLE BASIC SERVICE TIER OFFERING) on a secondary TV without (NAME OF CABLE OPERATOR)-supplied equipment, you are entitled to one device for one year.

You can learn more about this equipment offer and eligibility at (WEBPAGE ADDRESS) or by calling (PHONE NUMBER). To qualify for any equipment at no additional charge or service fee, you must request the equipment between (DATE THAT IS 30 DAYS BEFORE ENCRYPTION) and (DATE THAT IS 120 DAYS AFTER ENCRYPTION) and satisfy all other eligibility requirements.

(vi) the cable system operator notifies its subscribers who have received equipment described in subsections (ii) through (iv) at least 30 days, but no more than 60 days, before the end of the free device transitional period that the transitional period will end. This notification must state:

- You currently receive equipment necessary to descramble or decrypt the basic service tier signals (either a set-top box or CableCARD) free of charge. Effective with the (MONTH/YEAR) billing cycle, (NAME OF CABLE OPERATOR) will begin charging you for the equipment you received to access (INSERT NAME OF CABLE BASIC SERVICE TIER

OFFERING) when (NAME OF CABLE OPERATOR) started encrypting those channels on your cable system. The monthly charge for the (TYPE OF DEVICE) will be (AMOUNT OF CHARGE).

(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.

* * * * *

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.

II. SUBPART T – NOTICES

2. Amend § 76.1603 to revise paragraph (d):

§ 76.1603 Customer Service – Rate and Service Changes.

* * *

(d) A cable operator shall provide written notice to a subscriber of any increase in the price to be charged for the basic service tier or associated equipment at least 30 days before any proposed

increase is effective. **If the equipment is provided to the consumer without charge pursuant to § 76.630, the cable operator shall provide written notice to the subscriber no more than 60 days before the increase is effective.** The notice should include **the price to be charged, and the date that the new charge will be effective, and** the name and address of the local franchising authority.

APPENDIX B

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rule Making (NPRM)*.² The Commission sought written public comment on the proposals in the *NPRM*, including comment on the IRFA.³ No commenting parties specifically addressed the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA. The Commission will send a copy of the R&O, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration.⁴ In addition, the R&O and FRFA (or summaries thereof) will be published in the Federal Register.⁵

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

2. With this Report and Order, the Commission amends its rules to allow cable operators to encrypt the basic service tier in all-digital cable systems if they comply with certain consumer-protection measures. This rule change will benefit consumers who can have their cable service activated and deactivated from a remote location. By allowing remote activation and deactivation, we expect our amended rules will result in benefits to both cable operators and consumers by significantly reducing the number of service calls associated with provisioning service and significantly reducing the need for subscribers to wait for service calls to activate or deactivate cable service. At the same time, we recognize that this rule change will adversely affect a small number of cable subscribers who currently view the digital basic service tier without using a set-top box or other equipment. If a cable operator decides to encrypt the digital basic tier, then these subscribers will need equipment to continue viewing the channels on this tier. To give those consumers time to resolve the incompatibility between consumer electronics equipment (such as digital television sets) and newly encrypted cable service, we require operators of cable systems that choose to encrypt the basic service tier to comply with certain consumer protection measures for a period of time. The Commission concludes that allowing cable operators to encrypt the basic service tier in all-digital systems will lead to benefits like decreased service calls and theft of service, with few associated burdens on consumers. Therefore the Commission believes that this rule change will reduce burdens on small entities. The Commission predicts that encryption of the basic service tier will not substantially affect compatibility between cable service and consumer electronics equipment for most subscribers because over 75 percent of subscribers already have set-top boxes to decrypt the signals. Because the rule is voluntary—a cable operator with an all-digital system may choose whether to encrypt that system—each cable operator may decide whether the benefits of encryption (which include reduced service calls and reduced theft) outweigh the cost of providing its subscribers with the equipment they will need to continue viewing the channels on the basic service tier.

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

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 *Basic Service Tier Encryption; Compatibility Between Cable Systems and Consumer Electronics Equipment*, 26 FCC Rcd 14870, 14885 (2011).

³ See *id.*

⁴ See 5 U.S.C. § 603(a).

⁵ See *id.*

service is common, and the encryption rule does not translate well in systems that offer all-digital service. Therefore, the Commission will allow all-digital cable operators to encrypt the basic service tier.

4. 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 extremely small, these consumers may be affected by lifting the encryption prohibition for all-digital cable systems. To address this problem, we conclude that 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,⁶ including a requirement that the six largest cable operators offer IP-enabled set-top boxes to subscribers as part of these protections.

5. The Commission believes that the rule will save small entities money. The consumer protection element of the rule—the requirement that cable operators offer existing basic tier customers set-top boxes without charge for certain lengths of time—does associate a cost with the rule. But the Commission believes that the financial benefit to small cable operators in reduced truck rolls and theft of services will far outweigh that cost. Furthermore, because the decision of whether to encrypt the basic tier is voluntary, small businesses will be able to make a business decision about whether to encrypt.

B. Legal Basis

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

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

7. 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.⁷ 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.⁸ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁹ A

⁶ A cable operator that chooses to encrypt must (i) offer to existing subscribers who subscribe only to the basic service tier and do not use a set-top box or CableCARD, the subscriber's choice of a set-top box or CableCARD on up to two television sets without charge for two years from the date of encryption; (ii) offer existing subscribers who subscribe to a level of service above "basic only" but use an additional television set to access only the basic service tier without the use of a set-top box or CableCARD at the time of encryption, the subscriber's choice of a set-top box or CableCARD on one television set without charge for one year from the date of encryption; and (iii) offer existing subscribers who receive Medicaid, subscribe only to the basic service tier, and do not use a set-top box or CableCARD, the subscriber's choice of a set-top box or CableCARD on up to two television sets without charge for five years from the date of encryption.

⁷ 5 U.S.C. § 603(b)(3).

⁸ 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.

⁹ 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
(continued....)

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”).¹⁰

8. Cable and Other Program Distribution. Since 2007, these services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined 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.”¹¹ The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees.¹² According to Census Bureau data for 2007, there were a total of 955 firms in this previous category that operated for the entire year.¹³ Of this total, 939 firms had employment of 999 or fewer employees, and 16 firms had employment of 1000 employees or more.¹⁴ Thus, under this size standard, the majority of firms can be considered small and may be affected by rules adopted pursuant to the NPRM.

9. Cable Companies and Systems (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.¹⁵ As of 2008, out of 814 cable operators,¹⁶ all but 10 (that is, 804) qualify as small cable companies under this standard.¹⁷ In addition, under the Commission’s rules, a “small system” is a cable system serving 15,000 or fewer subscribers.¹⁸ Current Commission records show 6,000 cable systems. Of these, 726 have 20,000 subscribers or more, based on the same records. We estimate that there are 5,000 small systems based upon this standard.

10. 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, 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.”¹⁹ There are approximately 63.7 million cable subscribers in the United States
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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.”

¹⁰ 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.

¹¹ U.S. Census Bureau, 2007 NAICS Definitions, “517110 Wired Telecommunications Carriers” (partial definition), <http://www.census.gov/naics/2007/def/ND517110.HTM#N517110>.

¹² 13 C.F.R. § 121.201, NAICS code 517110 (2007).

¹³ U.S. Census Bureau, 2007 Economic Census, Subject Series: Information, Table 5, Employment Size of Firms for the United States: 2007, NAICS code 5171102 (issued Nov. 2010).

¹⁴ *See id.*

¹⁵ 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).

¹⁶ Cable MSO Ownership, A Geographical Analysis, 2009 Edition, 14-31, SNL Kagan (June 2009).

¹⁷ *Id.* at 12.

¹⁸ 47 C.F.R. § 76.901(c).

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

today.²⁰ Accordingly, an operator serving fewer than 637,000 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.²¹ Based on available data, we find that the number of cable operators serving 637,000 subscribers or less is also 804.²² 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.²³ 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.

11. Direct Broadcast Satellite (“DBS”) Service. DBS service is a nationally distributed subscription service that delivers video and audio programming via satellite to a small parabolic “dish” antenna at the subscriber’s location. DBS, by exception, is now included in the SBA’s broad economic census category, “Wired Telecommunications Carriers,”²⁴ which was developed for small wireline firms. Under this category, the SBA deems a wireline business to be small if it has 1,500 or fewer employees.²⁵ However, the data we have available as a basis for estimating the number of such small entities were gathered under a superseded SBA small business size standard formerly titled “Cable and Other Program Distribution.” The definition of Cable and Other Program Distribution provided that a small entity is one with \$12.5 million or less in annual receipts.²⁶ Currently, only two entities provide DBS service, which requires a great investment of capital for operation: DIRECTV and EchoStar Communications Corporation (“EchoStar”) (marketed as the DISH Network).²⁷ Each currently offer subscription services. DIRECTV²⁸ and EchoStar²⁹ each report annual revenues that are in excess of the threshold for a small

²⁰ See Cable TV Investor: Deals & Finance, No. 655, SNL Kagan, March 31, 2009, at 6.

²¹ 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).

²² Cable MSO Ownership at 12.

²³ 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).

²⁴ See 13 C.F.R. § 121.201, NAICS code 517110 (2007). The 2007 North American Industry Classification System (“NAICS”) defines the category of “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.*” (*Emphasis* added to text relevant to satellite services.) U.S. Census Bureau, 2007 NAICS Definitions, “517110 Wired Telecommunications Carriers”; <http://www.census.gov/naics/2007/def/ND517110.HTM>.

²⁵ 13 C.F.R. § 121.201, NAICS code 517110 (2007).

²⁶ 13 C.F.R. § 121.201, NAICS code 517510 (2002).

²⁷ See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Thirteenth Annual Report, 24 FCC Rcd 542, 580, ¶ 74 (2009) (“13th Annual Report”). We note that, in 2007, EchoStar purchased the licenses of Dominion Video Satellite, Inc. (“Dominion”) (marketed as Sky Angel). See Public Notice, “Policy Branch Information; Actions Taken,” Report No. SAT-00474, 22 FCC Rcd 17776 (IB 2007).

²⁸ As of June 2006, DIRECTV is the largest DBS operator and the second largest MVPD, serving an estimated 16.20% of MVPD subscribers nationwide. See *id.* at 687, Table B-3.

business. Because DBS service requires significant capital, we believe it is unlikely that a small entity as defined by the SBA would have the financial wherewithal to become a DBS service provider. We seek comments that have data on the annual revenues and number of employees of DBS service providers.

12. Satellite Master Antenna Television (SMATV) Systems, also known as Private Cable Operators (PCOs). SMATV systems or PCOs are video distribution facilities that use closed transmission paths without using any public right-of-way. They acquire video programming and distribute it via terrestrial wiring in urban and suburban multiple dwelling units such as apartments and condominiums, and commercial multiple tenant units such as hotels and office buildings. SMATV systems or PCOs are now included in the SBA's broad economic census category, "Wired Telecommunications Carriers,"³⁰ which was developed for small wireline firms.³¹ Under this category, the SBA deems a wireline business to be small if it has 1,500 or fewer employees.³² However, the data we have available as a basis for estimating the number of such small entities were gathered under a superseded SBA small business size standard formerly titled "Cable and Other Program Distribution." The definition of Cable and Other Program Distribution provided that a small entity is one with \$12.5 million or less in annual receipts.³³ As of June 2004, there were approximately 135 members in the Independent Multi-Family Communications Council (IMCC), the trade association that represents PCOs.³⁴ The IMCC indicates that, as of June 2006, PCOs serve about 1 to 2 percent of the multichannel video programming distributors (MVPD) marketplace.³⁵ Individual PCOs often serve approximately 3,000-4,000 subscribers, but the larger operations serve as many as 15,000-55,000 subscribers. In total, as of June 2006, PCOs serve approximately 900,000 subscribers.³⁶ Because these operators are not rate regulated, they are not required to file financial data with the Commission. Furthermore, we are not aware of any privately published financial information regarding these operators. Based on the estimated number of operators and the estimated number of units served by the largest 10 PCOs, we believe that a substantial number of PCOs may have been categorized as small entities under the now superseded SBA small business size standard for Cable and Other Program Distribution.³⁷

13. Open Video Services. The open video system ("OVS") framework was established in 1996, and is one of four statutorily recognized options for the provision of video programming services by local exchange carriers.³⁸ The OVS framework provides opportunities for the distribution of video

(Continued from previous page)

²⁹ As of June 2006, DISH Network is the second largest DBS operator and the third largest MVPD, serving an estimated 13.01% of MVPD subscribers nationwide. *Id.* As of June 2006, Dominion served fewer than 500,000 subscribers, which may now be receiving "Sky Angel" service from DISH Network. *See id.* at 581, ¶ 76.

³⁰ *See* 13 C.F.R. § 121.201, NAICS code 517110 (2007).

³¹ Although SMATV systems often use DBS video programming as part of their service package to subscribers, they are not included in Section 340's definition of "satellite carrier." *See* 47 U.S.C. §§ 340(i)(1) and 338(k)(3); 17 U.S.C. §119(d)(6).

³² 13 C.F.R. § 121.201, NAICS code 517110 (2007).

³³ 13 C.F.R. § 121.201, NAICS code 517510 (2002).

³⁴ *See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Eleventh Annual Report, FCC 05-13, ¶ 110 (rel. Feb. 4, 2005) ("2005 Cable Competition Report").

³⁵ *See 13th Annual Report*, 24 FCC Rcd at 684, Table B-1.

³⁶ *Id.*

³⁷ 13 C.F.R. § 121.201, NAICS code 517510 (2002).

³⁸ 47 U.S.C. § 571(a)(3)-(4). *See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, MB Docket No. 06-189, Thirteenth Annual Report, 24 FCC Rcd 542, 606, ¶ 135 (2009) ("Thirteenth Annual Cable Competition Report").

programming other than through cable systems. Because OVS operators provide subscription services,³⁹ OVS falls within the SBA small business size standard covering cable services, which is “Wired Telecommunications Carriers.”⁴⁰ The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees. According to Census Bureau data for 2007, there were a total of 3,188 firms in this previous category that operated for the entire year.⁴¹ Of this total, 3,144 firms had employment of 999 or fewer employees, and 44 firms had employment of 1000 employees or more.⁴² Thus, under this size standard, most cable systems are small and may be affected by rules adopted pursuant to the NPRM. In addition, we note that the Commission has certified some OVS operators, with some now providing service.⁴³ Broadband service providers (“BSPs”) are currently the only significant holders of OVS certifications or local OVS franchises.⁴⁴ The Commission does not have financial or employment information regarding the entities authorized to provide OVS, some of which may not yet be operational. Thus, again, at least some of the OVS operators may qualify as small entities.

14. Computer Terminal Manufacturing. “Computer terminals are input/output devices that connect with a central computer for processing.”⁴⁵ The SBA has developed a small business size standard for this category of manufacturing; that size standard is 1,000 or fewer employees.⁴⁶ According to 2007 Census Bureau data, there were 42 establishments in this category that operated during 2007. Only 3 had more than 100 employees.⁴⁷ Consequently, we estimate that all of these establishments are small entities.

15. Other Computer Peripheral Equipment Manufacturing. Examples of peripheral equipment in this category include keyboards, mouse devices, monitors, and scanners.⁴⁸ The SBA has developed a small business size standard for this category of manufacturing; that size standard is 1,000 or fewer employees.⁴⁹ According to 2007 Census Bureau data, there were 647 establishments in this category that operated in 2007.⁵⁰ Of these, only 62 had more than 100 employees. Consequently, we estimate that the majority of these establishments are small entities.

16. Audio and Video Equipment Manufacturing. The SBA has classified the manufacturing of audio and video equipment under in NAICS Codes classification scheme as an industry in which a

³⁹ See 47 U.S.C. § 573.

⁴⁰ U.S. Census Bureau, 2007 NAICS Definitions, “517110 Wired Telecommunications Carriers”; <http://www.census.gov/naics/2007/def/ND517110.HTM#N517110>.

⁴¹ U.S. Census Bureau, 2007 Economic Census, Subject Series: Information, Table 5, Employment Size of Firms for the United States: 2007, NAICS code 5171102 (issued Nov. 2010).

⁴² See *id.*

⁴³ A list of OVS certifications may be found at <http://www.fcc.gov/mb/ovs/csovscer.html>.

⁴⁴ See *Thirteenth Annual Cable Competition Report*, 24 FCC Rcd at 606-07, ¶ 135. BSPs are newer firms that are building state-of-the-art, facilities-based networks to provide video, voice, and data services over a single network.

⁴⁵ U.S. Census Bureau, 2002 NAICS Definitions, “334113 Computer Terminal Manufacturing,” available at <http://www.census.gov/epcd/naics02/def/ND334113.HTM#N334113>.

⁴⁶ 13 C.F.R. § 121.201, NAICS code 334113.

⁴⁷ http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-fds_name=EC0700A1&-skip=300&-ds_name=EC073111&-lang=en

⁴⁸ 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>.

⁴⁹ 13 C.F.R. § 121.201, NAICS code 334119.

⁵⁰ http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-fds_name=EC0700A1&-skip=300&-ds_name=EC073111&-lang=en.

manufacturer is small if it has less than 750 employees.⁵¹ Data contained in the 2007 U.S. Census indicate that 491 establishments operated in that industry for all or part of that year. In that year, 376 establishments had between 1 and 19 employees; 80 had between 20 and 99 employees; and 35 had more than 100 employees.⁵² Thus, under the applicable size standard, a majority of manufacturers of audio and video equipment may be considered small.

D. Description of Reporting, Recordkeeping and Other Compliance Requirements

17. The rules adopted in the Order will require cable operators to notify their subscribers about offers of free equipment associated with encryption. The rule also requires a cable operator to notify its subscribers when those subscribers are subject to charges at the end of the free equipment period.

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

18. 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.⁵³

19. As an alternative to the rules the Commission adopted, the Commission considered leaving the current rule in place—with the result that no cable operator would realize the benefits of encryption—or exempting small cable companies from the consumer protection rules that require encrypting cable operators to provide certain subscribers with free set-top boxes for a limited time. The Commission rejected leaving the rule in place because that alternative would not lead to the benefits of reduced service calls and reduced cable theft. The Commission rejected exempting small cable companies from the consumer protection rules because it concluded that the protections are necessary to give affected consumers time to consider how to make consumer electronics equipment (such as digital television sets) compatible with newly encrypted cable service. For these reasons, the Commission concluded that basic service tier encryption prohibition should be relaxed. The Commission also concluded that transitional consumer protection measures are necessary to serve the limited number of consumers who currently access unencrypted cable service without the use of a set-top box.

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

20. None.

⁵¹ 13 CFR § 121.201, NAICS Code 334310.

⁵² http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-skip=300&-ds_name=EC073111&-lang=en.

⁵³ 5 U.S.C. § 603(b).

APPENDIX C

List of Commenters and Reply CommentersCommenters:

Alliance for Community Media
American Cable Association
Craig Arnold
Bend Cable Communications, LLC d/b/a BendBroadband
Cablevision Systems Corporation
City of Boston, Massachusetts
Comcast Corporation
Greg Cunningham
Hispanic Technology and Telecommunications Partnership (HTTP)
Mikrotec CATV, LLC and Intermountain Cable Inc.
Minority Media and Telecommunications Council (MMTC)
Montgomery County, Maryland
National Cable & Telecommunications Association
National Association of Telecommunications Officers and Advisors (NATOA) et al
The New Jersey Division of Rate Counsel
NYC Department of Information Technology and Telecommunications
Public Knowledge, Media Access Project
RCN Telecom Services, LLC
Mark Seekins
Christopher Thompson
Time Warner Cable Inc.

Reply Commenters:

AllVid Tech Company Alliance
Samuel Biller
Cablevision Systems Corporation
City of Boston, Massachusetts
City of Hialeah
City of Lancaster
City of Miami
City of York
Comcast Corporation
Consumer Electronics Association
Paul Goldberg
John Lachut
Eric Kotz
Motion Picture Association of America, Inc.
National Cable & Telecommunications Association
The New Jersey Division of Rate Counsel
Public Knowledge, Media Access Project
RCN Telecom Services, LLC
Time Warner Cable Inc.
Township of Irvington
Richard Utz

**STATEMENT OF
CHAIRMAN JULIUS GENACHOWSKI**

Re: Basic Service Tier Encryption, MB Docket No. 11-169

Today is a good day for consumers and for innovation in the video market. The Commission removes regulatory barriers that prevented cable companies from remotely activating service and forced consumers to wait for the cable guy to show up at their homes. At the same time, we ensure that encrypting cable signals won't limit consumers from using an ever-growing number of Internet-connected, third-party video devices, and keep barriers low for video device innovators. We make clear that cable companies can only encrypt their signals so long as these important pro-consumer, pro-innovation protections remain in place—to decouple the two components of the Order would shortchange consumers and innovators.

I appreciate the constructive participation of a number of stakeholders in this process. And I want to thank the FCC staff whose outstanding and diligent work produced an Order that removes regulatory barriers without harming innovation, all for the benefit of consumers.

**STATEMENT OF
COMMISSIONER ROBERT M. McDOWELL
APPROVING IN PART, CONCURRING IN PART**

Re: Basic Service Tier Encryption, MB Docket No. 11-169

At long last, we provide cable operators with the freedom to encrypt their basic service tier offering. Encryption will allow cable operators to activate and deactivate cable service remotely to better serve their customers. This newly-allowed ability will also prevent theft of service while evening the regulatory playing field with satellite providers that have not been subject to this rule.

On the other hand, there are some aspects of this order that, as a matter of good government, should have been handled differently. First, the Commission could have decided this matter more expeditiously. Needless delay of the relief we provide today has frustrated the private sector's ability to meet consumer demand. Going forward, it is my hope that the Commission will work with greater alacrity when pursuing the noble goal of providing greater flexibility to the private sector.

Second, in light of the flexibility we grant today, the six largest cable providers have committed to ensure basic service tier access to third-party IP-enabled devices. These commitments are preconditions to encryption for these entities. I am pleased that these IP-enabled device protections will sunset in three years; however, the Commission today also delegates to the Media Bureau authority to extend these protections should the bureau decide they are necessary to protect consumers. I would prefer that the Commission, rather than the bureau, make this call. I am concerned that delegating this authority to the bureau may invite further unnecessary delay.

Additionally, an ordering clause states that, if any of the Order's rule changes are invalidated, the remaining provisions will not be effective. I have concerns regarding the possible inconvenience and confusion that would be experienced by both consumers and cable operators if any portion of this order happens to be overturned by a court after cable operators have taken the necessary steps to encrypt service.

Despite these concerns and others, I vote to approve in part and concur in part to today's order. Furthermore, I thank the Chairman, my colleagues and our fine team in the Media Bureau for their conscientious work on this matter.

**STATEMENT OF
COMMISSIONER AJIT PAI
APPROVING IN PART, CONCURRING IN PART**

Re: Basic Service Tier Encryption, MB Docket No. 11-169

Today's item is a win for consumers. By updating our rules to keep pace with changing technology, cable operators will more often be able to activate and deactivate cable service remotely. This means that fewer Americans will have to rearrange their busy schedules for cable service appointments. It also means they will waste less time waiting for the "cable guy" to come to their homes.

That said, there are some aspects of the item with which I do not agree; I would prefer a less complicated order with fewer conditions. For example, I do not support the highly unusual non-severability provision contained in paragraph 45. The item does not explain why consumers should be denied the benefits of basic-tier encryption if "any provision of the rules, or the application thereof to any person or circumstance, are held to be unlawful or invalid." Indeed, if the application of *any* of the conditions contained in this order are held to be invalid as applied to *any* circumstance, cable operators apparently would be obligated to stop encrypting basic-tier signals even if they had already complied with all of the conditions set forth in this item (*e.g.*, providing free set-top boxes, etc.). The non-severability provision thus seems both overbroad and unnecessary.

Additionally, I believe that a policy judgment to extend the conditions pertaining to IP-enabled devices beyond their three-year term should be made by the Commission as a whole, rather than the Bureau on delegated authority.

Overall, however, I appreciate my colleagues' willingness to improve the original version of this item. In particular, it is important that consumers be provided with notice that clarifies how they will (or will not) be impacted by basic-tier encryption, rather than confuses them.

All in all, the benefits of this item clearly outweigh the drawbacks, so I am pleased to support it.