

**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

**COMMENTS OF  
COMCAST CORPORATION**

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**COMMENTS OF COMCAST CORPORATION**

Comcast Corporation hereby responds to the Commission’s Notice of Proposed Rulemaking (“*Notice*”) that proposes to eliminate the basic service tier encryption prohibition in all-digital cable systems, subject to certain conditions.<sup>1</sup> Comcast commends the Commission for focusing on unnecessary regulatory burdens by reassessing Section 76.630(a) of its rules. Comcast strongly supports the proposed rule change and urges the Commission to act expeditiously to modify a rule that has outlived its usefulness and is depriving the public of significant benefits.

**I. INTRODUCTION AND SUMMARY**

The benefits that would flow from elimination of the encryption prohibition in all-digital systems are substantial. In particular, encryption would allow Comcast and other cable operators to implement a “hot drop” model; operators would be able to leave service taps connected to the plant (or “hot”) even when a subscriber has discontinued service, and could remotely control the activation and deactivation of service. This contrasts with the current regime where the basic tier

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<sup>1</sup> *Basic Service Tier Encryption*, Notice of Proposed Rulemaking, MB Docket No. 11-169, FCC 11-153 (rel. Oct. 14, 2011) (“*Notice*”).

is transmitted on an unencrypted basis (i.e., “in-the-clear”), and operators must control access to the service by having a service technician manually disconnect the network connection at the tap. This “hot drop” capability would provide significant and tangible benefits: customers would not be inconvenienced by technician appointments for service connection and disconnection; cable providers would realize significant operational savings from reduced truck rolls and other efficiencies that can be reinvested in the development and deployment of advanced, consumer-friendly services; instances of cable service theft would be substantially reduced; and pollution and traffic congestion would be reduced. In addition, encryption would afford content creators greater protection against piracy of their high-value content, and would increase overall network reliability. Cablevision’s experience with encryption of the basic service tier in New York City confirms these benefits.

The proposed rule change also will result in no public interest harms. The encryption prohibition rule was implemented in 1994 to address a concern – compatibility between retail consumer electronics devices and basic tier analog cable service – that virtually no longer exists in all-digital cable systems today. The overwhelming majority of customers in all-digital systems will already have a set-top box (“STB”), a digital transport adapter (“DTA”), and/or a CableCARD-enabled retail device that provides access to digital services, so the impact of the rule change would be minimal. For the very small subset of customers who would be affected by encryption of the basic service tier in all-digital systems – i.e., only those customers who currently receive the unencrypted digital basic tier without an STB, DTA, or CableCARD-enabled retail device – the Commission has proposed reasonable and adequate equipment conditions that allay any concerns.

In light of the changed circumstances, the significant benefits that result from encryption, and the lack of cognizable harms, repeal of the rule is precisely the type of action that President Obama called for in his Executive Orders regarding regulatory burdens<sup>2</sup> and that Chairman Genachowski has embraced.<sup>3</sup> As the Commission recently explained in its “Preliminary Plan for Retrospective Analysis of Existing Rules,” the key factors it considers in identifying regulations ripe for retrospective analysis are whether the regulation:

- (1) has been affected by changes in technology or new scientific research or changes in 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 request for waivers by affected stakeholders or been identified by the public as needing revision.<sup>4</sup>

The repeal of the encryption rule for all-digital cable systems satisfies all of these criteria and should be adopted on an expedited basis.

## **II. ADOPTING THE PROPOSED RULES WILL RESULT IN SIGNIFICANT CONSUMER AND OTHER PUBLIC INTEREST BENEFITS.**

Comcast has made dramatic gains in reclaiming analog bandwidth over the last few years. It has reclaimed expanded basic channels in nearly 100% of its footprint,<sup>5</sup> and

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<sup>2</sup> See Exec. Order No. 13563 – Improving Regulation and Regulatory Review, 76 Fed. Reg. 3821 (Jan. 21, 2011); Exec. Order No. 13579 – Regulation and Independent Regulatory Agencies, 76 Fed. Reg. 41,587 (July 14, 2011). See also Press Release, White House, *Address by the President to a Joint Session of Congress* (Sept. 8, 2011) (speech by President Barack Obama) (“We should have no more regulation than the health, safety and security of the American people require. Every rule should meet that common-sense test.”), available at [www.whitehouse.gov/the-press-office/2011/09/08/address-president-joint-session-congress](http://www.whitehouse.gov/the-press-office/2011/09/08/address-president-joint-session-congress).

<sup>3</sup> See News Release, FCC, *Statement from FCC Chairman Julius Genachowski on the Executive Order on Regulatory Reform and Independent Agencies* (July 11, 2011), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-308340A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-308340A1.pdf).

<sup>4</sup> FCC, *Preliminary Plan for Retrospective Analysis of Existing Rules*, at 7 (Nov. 7, 2011), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-310874A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-310874A1.pdf).

approximately 90% of Comcast's cable customers now receive digital service. This digitization process usually has involved the recapture of about 40-50 analog channels (i.e., all analog channels except those on the basic service tier). Comcast has started the process of reclaiming the remaining analog channels on the basic service tier, which typically comprises 20-30 channels and includes local broadcast and PEG channels. Comcast plans to complete this all-digital transition in approximately 20% of Comcast's footprint by the end of this year, and to accelerate those efforts next year with the goal of reaching 50% or more of Comcast's footprint by the end of 2012.<sup>6</sup> This transition to all-digital delivery is consumer-friendly and furthers various Commission goals, as it will free up more capacity for additional HD channels, faster broadband Internet services, and innovative Internet Protocol ("IP")-based services.

As detailed below, encryption of the basic service tier is an important element of the digitization and bandwidth reclamation process and will result in substantial consumer and other public interest benefits.

**A. Eliminating the Encryption Prohibition in All-Digital Systems Would Result in Substantial Customer and Operational Benefits.**

Because of the basic tier encryption prohibition, basic service tier channels currently are transmitted "in-the-clear" (i.e., on an unencrypted basis) over the cable plant. To prevent unauthorized reception of these channels, Comcast must control the physical access to the cable plant at the tap – i.e., the point on the pole or pedestal where the cable "drop" wire running from

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(...footnote continued)

<sup>5</sup> See Transcript, Comcast Corporation, 3Q 2011 Earnings Call, at 2, 6 (Nov. 2, 2011), available at [http://www.cmcsk.com/common/download/download.cfm?companyid=CMCSA&fileid=514839&filekey=d73fcc07-0825-4172-8184-ae1586a49f75&filename=CMCSA-Nov\\_2\\_2011.pdf](http://www.cmcsk.com/common/download/download.cfm?companyid=CMCSA&fileid=514839&filekey=d73fcc07-0825-4172-8184-ae1586a49f75&filename=CMCSA-Nov_2_2011.pdf).

<sup>6</sup> Some of the systems scheduled to go all-digital carry basic and expanded basic channels in analog, so the digitization process will involve the reclamation of both tiers of service at the same time. For those systems where the expanded basic tier has already been reclaimed, the further digitization effort will only affect basic tier channels.

the customer's home connects to the cable plant.<sup>7</sup> For new subscribers, this means that Comcast typically must send a technician to the subscriber's home (a so-called "truck roll") to physically connect the drop to the plant. Likewise, when a subscriber cancels service, Comcast typically must initiate another truck roll and send a technician to disconnect the drop from the plant. Such service calls are costly, can be an inconvenience to customers who must schedule an appointment and wait for a technician, and contribute to air pollution and traffic congestion.

Encryption of the basic tier would allow Comcast to activate and deactivate service *remotely* (i.e., without the need for a service call) – something we know our customers would prefer. Comcast's experience with DTAs in markets where we are reclaiming analog channels demonstrates that customers strongly prefer the self-installation option versus having to schedule a service appointment with a technician. In fact, more than 80% of customers have chosen to self-install their DTAs.

If the encryption rule change were implemented, Comcast would be able to keep the connection to the home "on" (or "hot") at all times. For customers initiating service, Comcast could ship equipment to them, much as Comcast is doing today with DTAs and other equipment, or allow customers the option of picking up STBs or DTAs at a customer service center. Customers with retail devices likewise could arrange for self-installation of their CableCARDs. Customers would then simply hook up the equipment in their home at their own convenience and start receiving the service, which would have been enabled remotely. Similarly, when disconnecting service, instead of having to schedule a traditional service appointment for a technician to visit the customer's home to disconnect the service, encryption of the basic service

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<sup>7</sup> In the case of multiple dwelling units ("MDUs"), the connection to the plant is frequently located in a lockbox in the basement of the MDU.

tier would allow Comcast to remotely discontinue access to its services.<sup>8</sup> This “hot drop” model would eliminate the need for many truck rolls, to the benefit of Comcast and its customers, and without any countervailing harms.

As the *Notice* recognizes,<sup>9</sup> Cablevision’s recent experience in New York City demonstrates that encryption of the basic tier does in fact result in dramatic reductions in truck rolls. In evaluating the impact of the encryption waiver on truck rolls in a pilot area where Cablevision has implemented the “hot drop” model, Cablevision found that “truckless disconnects” comprised roughly 80% or more of all disconnects between October 2010 and August 11, 2011.<sup>10</sup> Cablevision also found that, in the pilot area, a substantial number of customers have chosen to have a truckless service reconnection,<sup>11</sup> and the number of households eligible for remote reconnections rose to 64.2% by July 2011.<sup>12</sup> Cablevision reported to the Media Bureau that its “preliminary experience in the pilot appears to confirm that truck rolls can be substantially reduced on a large scale.”<sup>13</sup> Comcast estimates that encryption of its basic service tier in all-digital systems would have a similar impact – reducing truck rolls to disconnect

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<sup>8</sup> Comcast would continue to offer customers the option of having a service technician visit their homes for professional installation and/or disconnection.

<sup>9</sup> See *Notice* ¶ 8.

<sup>10</sup> Letter from Michael E. Olsen, Senior Vice President, Legal Regulatory and Legislative Affairs, Cablevision, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 09-168, at 2 (Aug. 11, 2011) (“*Cablevision Aug. 11 Letter*”); see also Letter from Michael E. Olsen, Senior Vice President, Legal Regulatory and Legislative Affairs, Cablevision, to William T. Lake, Chief, Media Bureau, FCC, MB Docket No. 09-168, at 2 (Feb. 4, 2011) (“*Cablevision Feb. 4 Letter*”) (“[T]ruckless disconnects comprised 89.2%, 93.8%, and 95.7% of all disconnections in the months of November, December, and January, respectively.”).

<sup>11</sup> *Cablevision Feb. 4 Letter* at 2-3.

<sup>12</sup> *Cablevision Aug. 11 Letter* at 2.

<sup>13</sup> *Cablevision Feb. 4 Letter* at 3.

service by 90% and reducing truck rolls to reconnect service by 45%, and thereby eliminating thousands or even millions of truck rolls in Comcast's all-digital systems.

Not only would encryption of the basic service tier permit Comcast to offer service connections and disconnections in a manner that is more convenient for customers, but the corresponding reduction in truck rolls would also help reduce traffic congestion and air pollution by removing a substantial number of commercial vehicles from the road. Many of the Comcast cable systems that have already gone all-digital or will be going all-digital in the near future – and thus be able to encrypt the basic tier under the proposed rules – serve metropolitan areas with significant traffic and/or air pollution problems, such as the greater Chicago, Washington, D.C., and Philadelphia metropolitan areas. Thus, the concomitant reductions in fuel consumption, vehicle exhaust emissions like CO<sub>2</sub>, and number of vehicles on the road that accompany fewer trucks rolls are especially important public interest benefits.<sup>14</sup>

The *Notice* asks whether such environmental benefits might be outweighed by the deployment of additional customer equipment to access encrypted channels.<sup>15</sup> They would not. Comcast is deploying DTAs to basic tier customers, and these devices consume a very small amount of energy – typically between three and four Watts of energy per device.<sup>16</sup> In short, these devices have a small impact on energy use in the home.

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<sup>14</sup> There would also be important benefits in rural areas under a “hot drop” model. Areas with low-density populations frequently require long-distance service calls, which are expensive, inefficient, and consume relatively high amounts of fuel. Remote connection and disconnection would significantly reduce the need for such trips.

<sup>15</sup> See *Notice* ¶ 8.

<sup>16</sup> See Department of Energy, *Energy Conservation Program for Consumer Products and Certain Commercial and Industrial Equipment: Proposed Determination of Set-Top Boxes and Network Equipment as a Covered Consumer Product, Proposed Determination*, Comments of the National Cable & Telecommunications Association, Docket No. EERE-2010-BT-DET-0040, RIN No. 1904-AC52, at 3, 8 (Sept. 30, 2011) (“On the other end of the spectrum, the cable industry has also deployed low-wattage digital transport adapters (DTAs) which help  
(footnote continued...)”)

The Media Bureau underscored the significance of these consumer, environmental, and other public interest benefits in the *Cablevision Order*. It concluded that waiver of the encryption rule would allow Cablevision to realize the benefits that result from remote connection and disconnection, including “reduced costs for Cablevision, improved customer service, and reduced fuel consumption and CO<sub>2</sub> emissions”<sup>17</sup> and added that “Cablevision’s subscribers will also benefit from reduced installation charges and avoid the inconvenience of waiting for service calls.”<sup>18</sup> The proposed rule change would substantially amplify these benefits by allowing operators across the country with all-digital systems to better serve customers, realize operational efficiencies, and reduce their impact on the environment and traffic congestion.<sup>19</sup>

**B. Encryption of the Basic Service Tier Would Reduce Theft of Service, Protect High-Value Content, and Improve Service Reliability.**

Allowing cable operators to encrypt the basic service tier would curtail theft of service, which the Commission has previously identified as a significant factor for granting waivers of

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(...footnote continued

customers with analog TVs receive video delivered by all-digital cable systems. . . . Set-top boxes now in use by cable operators include . . . Pace and Technicolor DTAs that use less than 4 Watts.”).

<sup>17</sup> *In re Cablevision Systems Corporation’s Request for Waiver of Section 76.630(a) of the Commission’s Rules*, Memorandum Opinion and Order, 25 FCC Rcd 134 ¶ 12 (M.B. 2010) (“*Cablevision Order*”).

<sup>18</sup> *Id.* See also *Waitsfield Cable Company Petition for Waiver of Section 76.630(a) Basic Tier Scrambling*, Memorandum Opinion and Order, 16 FCC Rcd 18859 ¶ 5 (2001) (“*Waitsfield Order*”) (granting requested waiver due, in part, to “costly and potentially inconvenient truck rolls”).

<sup>19</sup> The *Notice* asks (¶ 9) whether a system that has otherwise converted to all-digital delivery but maintains a single, unencrypted analog “barker” channel to inform potential subscribers about how to subscribe to service should be considered “all-digital” for purposes of the proposed rules. The answer is yes. Allowing operators to maintain a barker channel that exists solely to provide information to consumers is a logical and pro-consumer approach. NCTA has proposed in its comments that the revised rules accommodate the use of a barker channel, and Comcast fully supports that proposal.

the encryption rule<sup>20</sup> and which has formed the basis for several waiver grants.<sup>21</sup> When cable services are delivered “in-the-clear,” they are vulnerable to theft.<sup>22</sup> The cable industry previously estimated that approximately 5% of cable-homes-passed access cable services on an unauthorized basis, resulting in nearly \$5 billion in unrealized revenue (more than 8% of gross industry revenues in the year of the study).<sup>23</sup> In markets where Comcast continues to deliver expanded basic channels in analog, the unauthorized service rates typically range from 5-10%; those percentages are slightly lower in markets where expanded basic has been migrated to digital and encrypted. If Comcast could encrypt the basic service tier channels, the unauthorized service rate would likely drop into the very low single digits.

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<sup>20</sup> See 47 C.F.R. § 76.630(a) (inviting waivers based on theft-of-service concerns); see also *In re Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992; Compatibility Between Cable Systems and Consumer Electronics Equipment*, First Report and Order, 9 FCC Rcd 1981 ¶ 57 (1994) (“1994 Compatibility Order”) (“We do, however, understand that there are instances where cable operators may need to scramble signals to prevent theft of service . . . . To accommodate such cases, cable operators may seek a waiver of the scrambling prohibition. Cable operators requesting such waivers will be required to demonstrate either a substantial problem with theft of basic tier service or a strong need to scramble basic signals for other reasons.”).

<sup>21</sup> See, e.g., *In re San Juan Cable LLC d/b/a OneLink Communications Petition for Waiver of Section 76.630(a) Basic Tier Scrambling*, Memorandum Opinion and Order, 26 FCC Rcd 321, ¶ 9 (M.B. 2011) (“OneLink Order”) (“We find that OneLink’s contentions regarding a substantial problem with theft justify granting the requested waiver.”); *In re Centennial Puerto Rico Cable TV Corp. Petition for Waiver of Section 76.630(a), Basic Tier Scrambling*, Memorandum Opinion and Order, 18 FCC Rcd 7736 ¶ 7 (M.B. 2003) (“Centennial Order”) (same); *In re Liberty Cablevision of Puerto Rico, Inc. Petition for Waiver of Section 76.630(a) Basic Tier Scrambling*, Memorandum Opinion and Order, 15 FCC Rcd 15064 ¶ 6 (C.S.B. 2000) (same). As noted *supra* at 3, the Commission’s Preliminary Plan for Retrospective Analysis of Existing Rules notes that one factor in identifying rules for review is whether the rule has been subject to frequent waiver requests. That is the case with the encryption rule. The Commission granted the Cablevision and OneLink waiver requests within the last two years, and four other requests (RCN, Inter Mountain Cable, Coaxial Cable TV, and Mikrotec) are pending at the Commission.

<sup>22</sup> These vulnerabilities to service theft also force Comcast to spend substantial resources to audit its plant for illegal connections.

<sup>23</sup> National Cable & Telecommunications Association, *2004 Survey of Cable Theft*, Jan. 2005, available at [http://i.ncta.com/ncta\\_com/PDFs/NCTA-2004-Signal-Theft-Survey-Results.ppt](http://i.ncta.com/ncta_com/PDFs/NCTA-2004-Signal-Theft-Survey-Results.ppt). While digitization has aided in efforts to reduce rates of service theft in recent years, piracy is still a significant problem, and encryption of the basic service tier is needed to further reduce service theft.

Encryption also will provide benefits to broadcasters and other programmers whose services are carried on the basic service tier. Programmers have advised the Commission on numerous occasions of the critical importance of encryption in securing high-value digital content from piracy and Internet redistribution of such content.<sup>24</sup> This is a significant concern for digitally-delivered basic tier channels. Recent retransmission consent agreements between broadcasters and MVPDs underscore the high value that is placed on local broadcast signals and make clear that industry participants have an interest in the secure delivery of those signals and the prevention of unauthorized redistribution of those signals over the Internet.<sup>25</sup> The Commission itself has previously acknowledged that, without a method to protect high-value digital broadcast content from such unauthorized redistribution, content producers will seek alternate distribution outlets for secure delivery of their programming.<sup>26</sup> Continued delivery of unencrypted digital broadcast content, therefore, could threaten the robustness of broadcast programming. Moreover, to the extent individuals are accessing broadcast channels through an

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<sup>24</sup> See, e.g., Joint Reply Comments of Program Networks (CBS Corporation; Discovery Communications, LLC; NBC Universal, Inc.; News Corporation; Time Warner, Inc.; Viacom, Inc.; and The Walt Disney Company, Inc.), CS Docket No. 97-80, at 5-6 (Aug. 12, 2010) (“In digital environments, content security is of the utmost importance.”); Viacom Ex Parte, MB Docket No. 10-91, CS Docket No. 97-80, PP Docket No. 00-67, at 1 (Nov. 22, 2010) (noting concerns about “the critical need to protect audio-visual content against theft and unlawful distribution”); Opposition of The Walt Disney Company, CSR-7902-Z, CS Docket No. 97-80, at 2 (July 9, 2009) (“[I]t is critical to content providers that protections are in place to prevent unauthorized reception, reproduction, and redistribution of their content. In an increasingly digital world, utilizing content encryption methodologies is the only acceptable solution for adequate protection for this content. This issue is of the utmost importance to Disney and all major content providers.”).

<sup>25</sup> See, e.g., Mike Farrell, *Kagan: Retrans Take to Reach \$3.6B in 2017*, Multichannel News, May 25, 2011, available at [http://www.multichannel.com/article/468794-Kagan\\_Retrans\\_Take\\_To\\_Reach\\_3\\_6B\\_in\\_2017.php](http://www.multichannel.com/article/468794-Kagan_Retrans_Take_To_Reach_3_6B_in_2017.php) (summarizing SNL Kagan analysis that found retransmission consent fees will rise from \$1.14 billion in 2010 to \$3.61 billion by 2017); Mike Farrell, *CBS Raises the Retrans Bar*, Multichannel News, May 24, 2011, available at [http://www.multichannel.com/article/468731-CBS\\_Raises\\_the\\_Retrans\\_Bar.php](http://www.multichannel.com/article/468731-CBS_Raises_the_Retrans_Bar.php) (“Retransmission consent and reverse compensation revenue could double over the next five years to \$1 billion at CBS[.]”).

<sup>26</sup> *Digital Broadcast Content Protection*, Report and Order and Further Notice of Proposed Rulemaking, 18 FCC Rcd 23550 ¶ 4 (2003) (“[T]he potential threat of mass indiscriminate redistribution will deter content owners from making high value digital content available through broadcasting outlets absent some content protection mechanism.”).

unauthorized connection to cable service, those viewers are not captured by Nielsen ratings, thereby depriving broadcasters of advertising revenue.

Allowing encryption of the basic service tier in all-digital systems also will improve service reliability in such systems. If all channels were encrypted, there would be less incentive for individuals to manipulate equipment to obtain unauthorized access to service. Such piracy is often accomplished via splitters, unauthorized tap connections, and the like, which can degrade connections, reduce service quality, and prompt customer complaints. Similarly, because encryption would enable remote service connections and disconnections, technicians would need to access drop lines less frequently, thereby reducing “wear-and-tear” on the lines and the need for maintenance.

In the *OneLink Order*, the Media Bureau recognized that improved service reliability was a benefit that flows from encryption of the basic tier, noting that “with less compromise to the physical integrity of its system, OneLink will be able to offer a better quality signal to all authorized subscribers.”<sup>27</sup> The same reasoning applies with respect to the proposed rule change. Encryption of the basic tier will allow Comcast to improve the integrity and security of its network and provide a better quality signal to *all* of its subscribers.<sup>28</sup>

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<sup>27</sup> *OneLink Order* ¶ 10.

<sup>28</sup> The *Notice* asks whether the proposed rules should cover IP-delivered cable services. *Notice* ¶ 9. The Commission has never construed the encryption prohibition as applying to IP-delivered cable – AT&T’s U-verse service is fully encrypted – and for good reason. In an IP environment, encryption via software-based security, such as digital rights management, is an essential component of safeguarding the integrity and reliability of the service and ensuring that only customers with the proper entitlements to particular services receive those services. Furthermore, the Commission’s approach is consistent with Section 624A, which directs that “the Commission shall not limit the use of scrambling or encryption technology where the use of such technology does not interfere with the functions of subscribers’ television receivers or video cassette recorders.” 47 U.S.C. § 544a(b)(2). Encryption of IP-delivered cable services has no impact on QAM TVs since those TVs have no ability to access IP-delivered video. Moreover, IP-delivered cable services are furthering device compatibility goals by facilitating the delivery of the service to a growing number of IP-enabled consumer electronics devices without the need for an STB. For example, in recent months, Cablevision, Time Warner Cable, and DirecTV have introduced iPad applications that  
(footnote continued...)

**C. The Proposed Rules Would Promote Continued Innovation and Investment in Cable Networks.**

Encryption of the basic service tier in all-digital systems would help facilitate – and expedite – the cable industry’s migration to all-digital delivery, which, in turn, will result in the deployment of advanced, consumer-friendly services that consumers highly value. Once analog bandwidth has been reclaimed, cable operators are able to repurpose that bandwidth to deliver faster high-speed Internet, more HD channels, more VOD content, and innovative IP-based services.

Of course, there are substantial costs associated with digitization efforts. For example, in systems where Comcast has reclaimed analog service tiers and transitioned to all-digital delivery, Comcast has incurred hundreds of millions of dollars in costs in providing DTAs to customers. Likewise, to deliver video in IP, cable operators must invest in headend servers to encode programming in IP and in other network and equipment changes. The development of other cutting-edge services similarly requires the investment of substantial resources.

The cost savings associated with encryption – fewer truck rolls, reduced signal theft, improved network reliability, and so forth – can help defray these transition-related costs and provide greater incentives for operators to complete these transitions as quickly as possible. These significant savings incentivize operators to migrate rapidly to all-digital networks and invest in innovative new products that customers demand and highly value.

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(...footnote continued

facilitate the delivery of video content to tablets, and Comcast and Verizon have recently announced that certain subscription content will be available to subscribers via an Xbox. *See, e.g.*, Letter from Kathryn A. Zachem, Senior Vice President, Comcast Corporation, *et al.* to Marlene H. Dortch, Secretary, FCC, MB Docket No. 10-91, at 4 (Oct. 17, 2011); Letter from Kathryn A. Zachem, Senior Vice President, Comcast Corporation, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 10-91 (Oct. 5, 2011).

In light of the pro-consumer, pro-innovation benefits associated with cable operators going all-digital, the Commission should move expeditiously to approve its proposed changes to the encryption rule to help realize these benefits. The Commission has previously recognized the need to move quickly to encourage technological innovation,<sup>29</sup> and should do so here.

### **III. ADOPTING THE PROPOSED RULES WOULD RESULT IN NO PUBLIC INTEREST HARMS.**

#### **A. Equipment Compatibility Is Not a Concern in Digital Cable Systems Due to the Ubiquity of Set-Top Boxes and Other Devices to Access Digital Services.**

The Commission adopted the encryption rule in 1994 in order “to promote compatibility between cable service and consumer electronics equipment.”<sup>30</sup> At the time, cable customers expected to be able to receive cable service without an STB. Cable systems delivered one-way analog services, and most channels were delivered on an unencrypted basis. As the Commission noted in its 1994 Order, “[t]his rule also will have minimal impact on the cable industry in view of the fact that most cable systems now generally do not scramble basic tier signals.”<sup>31</sup>

As the Commission observes in the *Notice*, the situation is fundamentally different today.<sup>32</sup> Cable operators are migrating more and more of their analog channels to digital, and provide VOD, interactive program guides, and other two-way services. Subscribers now have

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<sup>29</sup> See, e.g., *In Re Evolution Broadband, LLC’s Request for Waiver of Section 76.1204(a)(1) of the Commission’s Rules*, Memorandum Opinion and Order, 24 FCC Rcd 7890 ¶ 15 (2009) (establishing streamlined waiver process to facilitate deployment of one-way navigation devices and cable migration to all-digital networks); FCC, *Connecting America: The National Broadband Plan* 95 (Mar. 16, 2010), available at <http://download.broadband.gov/plan/national-broadband-plan.pdf> (recommending that the Commission “move expeditiously to conclude the TV white spaces proceeding” to help “accelerate the introduction of new innovative products and services”).

<sup>30</sup> *1994 Compatibility Order* ¶ 55.

<sup>31</sup> *Id.*

<sup>32</sup> See *Notice* ¶¶ 2-4.

access to hundreds of channels, and only a handful of them are included in the basic service tier. Moreover, operators are starting to deliver their cable services in IP.<sup>33</sup> In this environment, the overwhelming majority of cable customers already have STBs, DTAs, or CableCARD-enabled retail devices to access cable services, and almost all channels are already delivered with encryption.<sup>34</sup> The *Notice* indicates that, industry-wide, “over three-quarters of cable subscribers have at least one device in their home that can both demodulate and decrypt digital cable services.”<sup>35</sup> In fact, across Comcast’s footprint, approximately 90% of its customers take digital service, and the average digital customer has 2.5 digital STBs or DTAs.<sup>36</sup>

Moreover, in Comcast systems that have completed the transition to all-digital, the percentage of customers with STBs, DTAs, or CableCARDS will be closer to 100%. Consequently, the concern the encryption rule is designed to address – compatibility between consumer electronics devices and cable service – is simply not an issue in Comcast’s all-digital systems. Cablevision’s experience in New York City confirms the minimal effect encryption will have on subscribers. Despite the large scope of Cablevision’s encryption waiver – it

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<sup>33</sup> See *supra* note 28.

<sup>34</sup> The Commission has noted the ubiquity of converters and other set-top devices in the context of the broadcasters’ transition to digital. See *Carriage of Digital Television Broadcast Signals; Amendment to Part 76 of the Commission’s Rules*, Third Report and Order and Third Further Notice of Proposed Rulemaking, 22 FCC Rcd 21064 ¶ 42 (2007) (“After the DTV transition . . . some sort of set-top or converter box will be the rule rather than the exception for those Americans with analog television sets. Whether consumers currently obtain video programming through over-the-air broadcasts, cable, or DBS, they generally will need either set-top boxes or digital televisions to receive programming once the transition is complete.”).

<sup>35</sup> *Notice* ¶ 8.

<sup>36</sup> See Transcript, Comcast Corporation, 4Q 2010 Earnings Call, at 9 (Feb. 16, 2011), available at [http://files.shareholder.com/downloads/CMCSA/0x0x442204/dc126a85-c48e-4f65-85ce-750ed50a1fdd/CMCSA\\_Transcript\\_2.16.11.pdf](http://files.shareholder.com/downloads/CMCSA/0x0x442204/dc126a85-c48e-4f65-85ce-750ed50a1fdd/CMCSA_Transcript_2.16.11.pdf).

covered approximately 401,000 subscribers – Cablevision deployed only 739 set-top boxes pursuant to the equipment conditions in its waiver order.<sup>37</sup>

The Commission tentatively concludes in the *Notice* that it is appropriate to allow basic tier encryption in light of these marketplace developments.<sup>38</sup> This tentative conclusion is fully supported in prior waiver orders, where the Media Bureau has found that high digital penetration levels address the concerns underlying the basic tier encryption ban. For example, in the *Cablevision Order*, the Bureau found it compelling that almost all Cablevision subscribers already had digital set-top boxes or CableCARDS, so “problems due to incompatibility between cable service and consumer electronics equipment will not be widespread once basic tier scrambling is commenced.”<sup>39</sup> Similarly, in the *Centennial Order*, the Bureau found that “[w]ith such a high percentage of subscribers already using set-top boxes, problems due to compatibility between cable service and consumer electronics equipment will not be widespread once basic tier scrambling is commenced.”<sup>40</sup>

**B. The Proposed Equipment Conditions Are Reasonable and Mitigate Any Potential Harms for Basic Tier Customers.**

For the small subset of customers in all-digital systems who receive basic tier service without a digital STB, DTA, or CableCARD-enabled retail device, the *Notice* proposes reasonable equipment accommodations to ensure that such customers have access to the

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<sup>37</sup> *Cablevision Aug. 11 Letter*, Attachment.

<sup>38</sup> *See Notice* ¶ 8.

<sup>39</sup> *Cablevision Order* ¶ 15.

<sup>40</sup> *Centennial Order* ¶ 8; *see also OneLink Order* ¶ 10 (noting that after OneLink goes all-digital in its Puerto Rico system, the percentage of subscribers who will have set-top boxes will be over 99% and that, as a result, “we believe that problems related to incompatibility between cable service and consumer electronics equipment will be minimal or nonexistent.”).

encrypted basic tier. Specifically, the *Notice* proposes that cable operators that choose to encrypt the basic tier in all-digital systems would be required to provide: (1) up to two pieces of equipment without charge for two years to existing basic service tier subscribers who do not use digital equipment to access the basic tier at the time of encryption; (2) one piece of equipment without charge for one year to existing digital subscribers who have an additional TV receiving the basic tier without equipment at the time of encryption; and (3) up to two pieces of equipment without charge for five years to existing basic-only subscribers who receive Medicaid and also receive the basic tier without equipment at the time of encryption.<sup>41</sup> The conditions are reasonable and are sufficient to ensure that customers who utilize QAM TVs to access the basic tier are not adversely affected by the proposed rule change.

Comcast is aware that NCTA will be proposing certain minor amendments to the Commission's proposed draft rules in the comments that NCTA is filing today. The NCTA amendments do not make substantive changes to the set-top box conditions that the Commission has included in its proposed rules; rather, NCTA's proposed language clarifies potential ambiguities and is consistent with the text and intent of the *Notice*. Comcast fully supports those proposals and urges that they be adopted in the Commission's final order in this proceeding.

**C. Encryption of the Basic Tier Will Not Produce Widespread Consumer Confusion or Complaints.**

Comcast's own experience with digitization, which has included widespread deployment of DTAs, and Cablevision's recent experience with encryption of the basic service tier, confirm that there likely will be very few customer complaints if the rules are modified as proposed. For

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<sup>41</sup> *Notice* ¶ 12 & App. A. As the Commission explained in the *Notice*, a cable operator could offer its subscribers one-way DTAs, two-way set-top boxes, or CableCARDS to fulfill these conditions. *Notice* ¶ 12 n.59.

example, when Comcast digitized and encrypted its expanded basic tier in Portland, Comcast received only 12 calls – out of 630,000 subscribers in the affected systems – from customers with questions about their inability to access the encrypted channels on their QAM TVs. And those concerns were resolved in short order. Similarly, Cablevision reported to the Commission that the encryption of its basic service tier in New York City “resulted in no complaints escalated to management, written complaints, or agency complaints referred to the company.”<sup>42</sup> These experiences suggest that the benefits here far outweigh any costs to the public, making the grant of the requested waiver clearly in the public interest.

**IV. SECTION 624A GRANTS THE COMMISSION AUTHORITY TO AMEND THE RULE, AND ALLOWING ENCRYPTION OF THE BASIC SERVICE TIER IN ALL-DIGITAL SYSTEMS IS CONSISTENT WITH THE STATUTE.**

The Commission seeks comment on whether the proposed rules would satisfy the Commission’s regulatory obligations under Section 624A of the Communications Act.<sup>43</sup> They would. Section 624A provides the Commission with ample authority to amend the encryption rule, and permitting encryption in all-digital systems is fully consistent with the Act. 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[.]”<sup>44</sup> and Section 624A(d) specifically requires the Commission to “periodically review and, if necessary, modify the regulations issued pursuant to this section . . . to reflect improvements and changes in cable systems, television

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<sup>42</sup> *Cablevision Feb. 4 Letter* at 2.

<sup>43</sup> *See Notice* ¶ 10.

<sup>44</sup> 47 U.S.C. § 544a(b)(2).

receivers, video cassette recorders, and similar technology.”<sup>45</sup> Given the significant technological and marketplace changes that have occurred since the rule was first adopted, the rule change would be consistent with the statute’s directive to update the rules based on changing technologies.<sup>46</sup> The Commission previously has invoked Section 624A(d) to justify a rule change based on the proliferation of digital services<sup>47</sup> and should do so here.

The overarching goal of Section 624A(b)(1), the statutory provision authorizing the Commission to adopt the encryption rule, is ensuring that “cable subscribers will be able to enjoy the full benefit of both the programming available on cable systems and the functions available on their televisions[.]”<sup>48</sup> Because the overwhelming majority of customers in all-digital systems already have a digital STB, DTA, or CableCARD-enabled retail device, there will be no change in their ability to enjoy the full benefits of their service and equipment if digital basic channels are encrypted. For the small number of QAM TV owners affected by encryption of the basic

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<sup>45</sup> *Id.* § 544a(d).

<sup>46</sup> For example, the encryption rule was adopted at a time when cable was the dominant MVPD and there was little competition in the marketplace. That is no longer the case. DBS and telcos now provide service to over 40 million MVPD customers, or approximately 40% of the MVPD marketplace. *See* SNL Kagan, *U.S. Multichannel Industry Benchmarks* (2011) (showing that, in 2010, the DBS providers had more than 33 million subscribers out of 101 million pay TV subscribers); *See* Press Release, AT&T Inc., *AT&T Reports Solid Earnings, Strong Cash Flow, Robust Mobile Broadband Sales and Improving Wireline Revenue Trends* (Oct. 20, 2011) (reporting 3.6 million U-Verse subscribers at the end of the third quarter of 2011); Verizon Communications, *Financial and Operating Information As of September 30, 2011*, at 16 (Oct 21, 2011) (reporting 4 million FiOS TV connections at the end of the third quarter of 2011). Moreover, MVPDs now serving over 36 million customers (i.e., DirecTV, Dish Network, and AT&T) currently encrypt *all* levels of service (and therefore all of their subscribers must have STBs), and there have been no claims of consumer harm relating to consumer electronics device compatibility. In fact, market share has grown steadily for these providers over the years, while cable’s market share has declined, raising the question of what consumer benefits are served by the prohibition on basic tier encryption for only a segment of the marketplace.

<sup>47</sup> *See In re Compatibility between Cable Systems and Consumer Electronics Equipment*, Report and Order, 15 FCC Rcd 17568 ¶ 23 (2000) (relying on Section 624A authority to adopt new DTV receiver label definitions in response to the development of digital services).

<sup>48</sup> 47 U.S.C. § 544a(b)(1).

tier, the equipment conditions ensure that such customers likewise will be able to enjoy the full benefits of encrypted digital cable service.

Moreover, Section 624A(c)(1) directs the Commission to use a cost-benefit analysis when assessing the need for and scope of any encryption rules.<sup>49</sup> That calculus strongly counsels in favor of repealing the encryption rule for all-digital systems. As described at length above, there will be little to no costs to consumers because the vast majority will not be affected at all, and the small subset of customers requiring a new digital STB or DTA will be provided with the equipment. The benefits, however, are substantial. This strongly supports modifying the rule as proposed in the *Notice*.

## **V. CONCLUSION**

Comcast commends the Commission for initiating the rulemaking process to modify a rule that imposes unnecessary regulatory burdens. As demonstrated above, concrete and significant consumer and other public interest benefits would result from encryption of the basic service tier in all-digital systems, and these benefits would be achieved with little or no associated costs to consumers. The proposed rule changes are fully consistent with the Commission's recently-announced "Preliminary Plan for Retrospective Analysis of Existing Rules" because (1) changes in technology have made the existing rule obsolete; (2) the existing rule has imposed unnecessary burdens, and the proposed rules would result in substantial net benefits to the public; and (3) there have been frequent requests for waivers by a wide-range of industry participants. To maximize consumer benefits and facilitate operators' transition to all-

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<sup>49</sup> *Id.* § 544a(c)(1).

digital delivery of services, the Commission should act expeditiously to adopt final rules in this proceeding.

Respectfully submitted,

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