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Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: Basic Service Tier Encryption; Compatibility Between Cable Systems and Consumer Electronics Equipment, MB Docket No. 11-169, PP Docket No. 00-67.

Dear Ms. Dortch:

On February 16, 2012, Rick Chessen and the undersigned of NCTA, Jordan Goldstein of Comcast Corporation, Paul Glist of Davis Wright Tremaine, Christopher Harvie of Mintz Levin, and Jonathan Friedman of Willkie Farr & Gallagher LLP met with the following Media Bureau staff to discuss issues in the Commission’s basic tier encryption Notice of Proposed Rulemaking (“NPRM”): Michelle Carey, Mary Beth Murphy, Nancy Murphy, Steve Broeckaert, John Gabrysch, and Brendan Murray. Also, on February 17, 2012, Rick Chessen spoke by phone with Jessica Almond, Special Counsel to Chairman Genachowski, on the same topic.

We discussed the substantial consumer and other public interest benefits associated with basic tier encryption. Encryption reduces the need for service calls. Initial service connections today typically *do* include a visit by the technician to the customer’s residence to assure that service is working properly. Encryption will enable operators to activate and deactivate service remotely, thereby eliminating the need for technician visits, which can be an inconvenience to customers, and reducing truck rolls and traffic congestion.¹ Cablevision has reported that as of the end of October 2011, in its fully encrypted systems in New York City, it was performing remotely 99.5% of all disconnects and has left active approximately 39.5% of the cable taps in the 401,000 household area. Thus, operational changes arising from encryption have resulted in virtually all service disconnects being handled remotely and a steadily growing number of households eligible for remote service

¹ Under this “hot drop” model, operators can also check remotely that the customer’s equipment is properly receiving service once service has been activated, or the customer can call or use an operator’s website or chat service to report any issues.

activation, thereby yielding far greater convenience and economy.² Today, self-install kits are typically used by *existing* customers who are receiving new equipment or upgrading equipment. For example, in systems where Comcast is digitizing service, it offers customers the option of receiving a DTA self-install kit by mail, and more than 80% of customers have selected that option.³ Because encryption enables many service connections to be handled remotely, customers could self-install their equipment as part of that process. Similarly, in the case of service disconnects, there would typically be no need for a technician visit to shut off service, and customers could mail back or drop off equipment.

Encryption also reduces service theft. Service theft is often accomplished via unauthorized tap connections that degrade connections and reduce service quality. Service theft also unfairly shifts costs to the law-abiding, which ultimately adds to consumer costs. If all channels are encrypted, there is less ability for individuals to manipulate equipment to obtain unauthorized access to service. RCN recently explained that it is unable to realistically prevent Internet-only customers from also receiving unencrypted basic service.⁴ Boxee's response to the Commission and the press has been that while service theft may wrongly benefit Boxee customers, it is not Boxee's problem.⁵ Boxee may seek to evade responsibility for signal theft, but cable operators need practical encryption tools to prevent this harm and improve service installation options.

The NPRM provided an opportunity to explore the benefits and harms of basic tier encryption, and the record overwhelmingly reflects the increased consumer benefits and consumer choices that will come with encryption of the basic tier accompanied by reasonable consumer protections.

Under the proposed rule change, once an all-digital system provides notice that it will encrypt its basic tier, transitional protections will be afforded to customers who have been accessing basic service with clear QAM devices. Cablevision has reported to the Commission that only 739 (or less than 0.1%) of its customers in its fully encrypted systems in New York City requested equipment

² See Letter from Jonathan Friedman, Counsel for Comcast Corporation, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67 (Jan. 20, 2012); Letter from Christopher J. Harvie, Counsel for Cablevision Systems Corporation, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67 (Jan. 24, 2012).

³ See Comcast Comments at 5.

⁴ Letter from John Nakahata, Counsel for RCN Telecom Services, LLC, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67, at 2 (Feb. 13, 2012) (noting that "because there are no commercially available 'traps' that filter video service from Internet service, RCN's internet-only customers can view unencrypted basic tier channels without paying for them.").

⁵ Jonathan Make, *Comm Daily*, *Cable Encryption Requests Seen Being Supplanted by FCC Order For Entire Industry*, at 9 (Feb. 16, 2012) ("If RCN does not find it cost effective to install these filters to protect the basic tier from Internet subscribers, that is their decision, [Boxee General Counsel Melissa] Marks said. "It has nothing to do with Boxee."); see also Letter from Melissa Marks, General Counsel, Boxee, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67, at 1-2 (Feb. 16, 2012) ("Boxee Feb. 16 Letter").

under the conditions in its waiver order.⁶ Boxee and other opponents of the rule change have provided no evidence to support their claims that *millions* of customers would be harmed by basic tier encryption.⁷ Rather, they point to the *percentage* of their customers who use clear QAM, without giving any indication of the actual *number* of customers involved or why they would be representative of the much larger cable customer base.⁸

Boxee and Boxee customers have many more choices following encryption of the basic service tier.

- Those who view Boxee as the “cord-cutting service” it advertises to its customers,⁹ can use an off-air antenna to access channels via the Live TV dongle. Numerous postings on Boxee’s online forums report great success in replacing the weak antenna included with Live TV with a higher quality indoor or outdoor antenna.¹⁰
- Those Boxee customers who prefer to “shave” the cord to basic-only before a system encrypts basic will, like other basic-only customers, qualify for a free set-top box or CableCARD under the proposed equipment conditions. They can utilize separate inputs on

⁶ See Cablevision Comments at 12-13; see also Comcast Comments at 16-17.

⁷ See, e.g., Letter from Melissa Marks, General Counsel, Boxee, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67, at Presentation, Slide 10 (Feb. 2, 2012) (“Boxee Feb. 2 Letter”); Letter from Melissa Marks, General Counsel, Boxee, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67, at 3-4 (Feb. 13, 2012) (“Boxee Feb. 13 Letter”); Letter from Ken Plotkin, CEO, Hauppauge Computer Works, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67, at 1-2 (Feb. 14, 2012) (“Hauppauge Letter”); Letter from Mark Ely, President & CEO, Real Simple Software, Inc., to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67, at 1-2 (Feb. 13, 2012).

⁸ Boxee notes the Commission’s statement that over three-quarters of cable customers already have at least one device to decrypt programming, and suggests that large numbers of customers (i.e., the customers with one or no devices in the home) could be impacted by encryption since customers typically have multiple TVs in the home. See Boxee Feb. 13 Letter at 3. That claim is incorrect for two basic reasons. First, the Commission is proposing that encryption be permitted only in cable systems *that will have already gone all-digital*. In such systems, nearly all customers, including basic tier customers, will *already* have equipment and will not be impacted by the encryption of the basic tier. Second, customers in all-digital systems typically have multiple devices, not one device, to decrypt programming. See BendBroadband Comments at 4 (noting that there are over 2.7 set-top boxes on average per household in its all-digital system).

⁹ See Letter from Neal M. Goldberg, General Counsel, NCTA, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67, at App. (Feb. 7, 2012) (“NCTA Letter”) (citing Boxee statements that Live TV is a cord-cutting service). In an interview last week with SNL Kagan, Boxee’s CEO Avner Ronen stated that: “Our mantra is cut the cord; it’s not necessarily don’t pay a monthly fee. It’s ‘don’t pay for cable TV.’ We just think the model is broke.” Deborah Yao, *Boxee CEO Mulls DVR Service; Not Scared of Apple TV*, SNL Kagan, Feb. 17, 2012.

¹⁰ See, e.g., “Live TV w/Leaf Plus Amplified Indoor HDTV Antenna,” at <http://forums.boxee.tv/showthread.php?t=53418>; “Got Live TV Today but...,” at <http://forums.boxee.tv/showthread.php?t=53353>; “Manually Adding a Channel to Live TV?,” at <http://forums.boxee.tv/showthread.php?t=54153>.

the TV for the basic tier and for Boxee. Any Boxee customer who was also a basic tier-only cable subscriber prior to the launch of the Live TV product *was in this exact situation less than one month ago*. Presumably, nearly all Boxee customers with cable are still utilizing separate inputs and would see no change with the encryption of the basic tier from their current situation.

- Once the customer rolls off the free box promotion (e.g., two years for regular basic tier customers and five years for basic tier customers who receive Medicaid), the basic tier customer will typically pay a low regulated rate for the device. For example, the regulated rate for Comcast-supplied DTAs is currently \$0.50 per month. This compares quite favorably to the cost of a Boxee device (\$167.99) plus the Live TV adapter (\$49).¹¹
- A basic-only customer can also use a third-party CableCARD device with a USB output and/or networking capabilities to receive encrypted basic channels. Hauppauge, SiliconDust, and others manufacture such devices that enable customers to access encrypted cable service. The CableCARDs would be provided for free under the equipment conditions.
- Boxee can build a CableCARD-slot into its device to access encrypted channels.¹² Recent press reports indicate that Boxee has plans to modify its device to support DVR capability.¹³ Boxee could presumably add CableCARD functionality to the device, as happened with the TiVo DVR.¹⁴

¹¹ In systems subject to effective competition, many operators still use the regulated rate for basic tier-only equipment.

¹² CableCARD is the Commission's approach for digital cable compatibility. See NCTA Letter at 7.

¹³ See Janko Roettgers, GigaOm, *Boxee May Launch a DVR Subscription Service*, Feb. 12, 2012, at <http://gigaom.com/video/boxee-dvr-subscription/>.

¹⁴ Boxee asserts that "the development process began [on the Live TV product] approximately a year ago, and was nearly complete when the current NPRM was published in October" and further states that it "was unable to predict that Clear QAM may be eliminated in such short order . . ." Boxee Feb. 16 Letter at 3. Since Boxee is still in the "development" stages of its possible DVR product, it has no excuse not to accommodate the possibility of a change in the encryption rule as it develops that product. Furthermore, its argument that it had no notice of a possible change in the encryption rule when it developed its Live TV product should also fall on deaf ears. Boxee was on notice that the Commission might consider eliminating the encryption rule as early as the *Cablevision Waiver Order* in January 2010. That Order specifically stated that the waiver "will provide an experimental benefit that could be valuable in the Commission's further assessment of the utility of the encryption rule." *In re Cablevision System Corporation's Request for Waiver of Section 76.630(a) of the Commission's Rules*, Memorandum Opinion and Order, 25 FCC Rcd. 134 ¶ 16 (2010). Moreover, parties in that proceeding had urged the Commission to proceed by rulemaking in this area, rather than grant further waivers. This is precisely the course the Commission has taken. In any event, even if the "development process" on Live TV was "nearly complete" when the NPRM was adopted last October, Boxee should have accounted for the possibility of the "tentative conclusions" in the NPRM becoming final or filed comments immediately rather than waiting until the 11th hour to raise objections.

We understand that Boxee would prefer that all cable operators rely on traps to accommodate Boxee's business decision to launch Live TV without accounting for encryption.¹⁵ However, traps are not a suitable alternative. Traps are expensive to install and remove; are less secure than encryption; can be physically disabled; and can cause interference issues on signals adjacent to the trap.¹⁶ Moreover, as RCN has explained, traps are not a viable solution for all-digital cable systems. Traps were designed for the *analog* environment.¹⁷ On an analog system, traps can block out the frequencies that are used to deliver analog basic channels. When operators reclaim analog and use the spectrum more efficiently, they often carry digital channels (including basic tier channels) on different frequencies that are *not* blocked by the existing traps. The number and location of basic tier channels vary by system, so commodity traps do not fit the digital basic line up of all-digital cable systems. Existing traps block a broader swath of frequencies than digital basic channels now occupy. As a result, traps can affect the delivery of other services, such as high-speed Internet, that may be located in frequencies adjacent to or within the frequencies blocked by the existing traps. Even if custom traps are used, they tend to lock in place the existing channel plan, making it difficult to rearrange channels and tiers because of the presence of physical traps on blocks of channels.

To address these issues, operators would need to: (1) undertake a very costly and disruptive effort to standardize the frequencies used for their digital basic channels across multiple systems, to reach economies of scale for the production of new traps; (2) rewrite the hundreds or thousands of channel maps that are used to map particular frequencies on the cable plant to particular channel numbers on a set-top box or CableCARD device (which is a manual process and prone to error); and (3) physically remove and replace all the existing traps in their plant with the new traps. Operators also would need to have custom traps manufactured for each cable system that did not match the "standardized" cable line-up. Hauppauge's proposal that cable operators install the equivalent of a hardened set-top box on the outside of every customer's home is little better. It would impose enormous costs on operators and their customers, and place a device where it would be more prone to theft and tampering, just for the benefit of the small number of QAM device users.¹⁸ In response to a question from staff, we also explained why relocating basic tier channels to higher frequencies on the cable plant and using a low-pass filter would raise the same types of challenges as other trapping approaches for all-digital systems. These suggestions would be very expensive and technically challenging, and would still result in a less secure, less flexible approach than the basic encryption technology that is used by every non-cable MVPD.

¹⁵ Boxee Feb. 16 Letter at 2; Hauppauge Letter at 3-4.

¹⁶ See BendBroadband Comments at 2-3.

¹⁷ See *In re Basic Service Tier Encryption, Compatibility Between Cable Systems and Consumer Electronics Equipment*, Notice of Proposed Rulemaking, 26 FCC Rcd. 14870 ¶ 3 n. 11 (2011) (explaining use of traps in analog cable systems).

¹⁸ See Hauppauge Letter at 3.

In a more recent letter, Boxee has also suggested that each cable operator be required to deliver basic service as a standard IP stream.¹⁹ We have catalogued elsewhere very promising and creative methods that cable operators are using or trialing for delivering services. These developments have blossomed precisely because the Commission has not sought to mandate a specific technology solution. We expressed our agreement with Boxee that the Commission should not consider DLNA-related interface issues in the context of this proceeding.²⁰ There is no basis for continuing to hold cable to an analog “non-scrambling” mandate or for holding this proceeding hostage to other technology developments.

In light of the foregoing, the Commission should eliminate the encryption ban for all-digital cable systems.

Sincerely,

/s/ Neal M. Goldberg

Neal M. Goldberg

cc: Jessica Almond
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Steve Broeckaert
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Brendan Murray

¹⁹ Boxee Feb. 16 Letter at 3.

²⁰ See Letter from Melissa Marks, General Counsel, Boxee, to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 11-169, PP Dkt. No. 00-67 (Feb. 15, 2012) (asserting that a DLNA-based interface “does not provide a remedy to the harms that would result from eliminating Clear QAM”). Although the Commission was asked to adopt DLNA in the 2010 CableCARD rulemaking, it did not want to repeat the mistake of codifying 1394 and intentionally declined to specify which interface should be included on HD set-top boxes. Instead, it set forth the functionalities required (e.g., recordable video, service discovery) and is allowing the market to decide the rest. The Commission acknowledged “considerable work ongoing in industry standard bodies to provide those functionalities,” and provided a December 1, 2012 effective date. See *In Re Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, Third Report and Order and Order on Reconsideration, 25 FCC Rcd. 14657 ¶ 44 (2010). Starting a proceeding to define that interface before the industry has even reached the due date is premature. It would reverse the wise decision to let the market choose the next connector, and would slow progress in DLNA by re-directing parties to lobby at the Commission rather than finishing the good work now underway.