
Telecommunications & Electronic Media

THE FCC: DEATH TO THE SET-TOP BOX! LONG LIVE THE SET-TOP BOX . . . OR IS IT APPS?

By Alex Okuliar

Note from the Editor:

This article discusses and critiques the FCC's proposed set-top box rule.

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- Gigi Sohn, Counselor to FCC Chairman Wheeler, *The End of Big Cable's Control over Your TV Set-top Box is Nigh*, THE DAILY DOT (June 22, 2016), <http://www.dailydot.com/layer8/unlock-the-box-fcc-gigi-sohn/>.
- Tom Wheeler, *FCC Chairman: Here are the new proposed rules for set-top boxes*, L.A. TIMES (Sept. 8, 2016), <http://www.latimes.com/opinion/op-ed/la-oe-wheeler-set-top-box-rules-20160908-snap-story.html>.
- Troy Wolverton, *Review: Consumers lose as FCC retreats on set-top box proposal*, PHYS.ORG (Sept. 14, 2016), <http://phys.org/news/2016-09-consumers-fcc-retreats-set-top.html>.

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Emboldened by its success with net neutrality, the Federal Communications Commission (FCC) may be looking to shake up the way you enjoy media at home. At the behest of FCC Chairman Tom Wheeler, on February 18, 2016, the agency issued a Notice of Proposed Rulemaking (NPRM) about television set-top boxes.¹ The proposal passed 3-2 on a party line vote, with the Democrats in favor and the Republicans opposed. The proposal—which would require cable companies to open access to set-top box technology to foster competition—has proved controversial, drawing commentary and debate from a wide spectrum of stakeholders. Very recently, it has met with criticism and opposition even among those who initially sponsored it, despite an eleventh hour compromise attempt by Chairman Wheeler. The agency has now taken the set-top box proposal off the agenda until next year, and many people think it will not move forward at all given the election of Republican Donald Trump as President.² Below, I explore the state of the set-top box, explain the nature of the proposed rule, and offer some perspective on why many feel the proposal is impractical and represents an inefficient government intrusion on a functioning free market. I close with a more detailed update on where the proposed rule stands today.

I. THE CURRENT STATE OF SET-TOP BOX TECHNOLOGY

Most cable companies bundle their programming with a set-top box that you can rent only from the cable company. Most of us really don't care for these clunky black boxes that resemble set pieces from cutting edge 1980s sci-fi movies like *War Games* and *Back to the Future*. The FCC cites to estimates that these boxes cost consumers \$20 billion a year in rental fees.³ Agency personnel argue that consumers are not getting their money's worth because, while the cost of televisions, computers, and mobile phones all have declined by about 90% since 1994, the price of set-top boxes has gone up about 185 percent.⁴ And about 99% of us rent a set-top box, so these fees are spread far and wide.⁵

Those are pretty compelling points in support of a proposal to shake up the current system. The NPRM from the FCC attempts to do that by requiring cable companies to open their video and related content to other companies to enable them to create navigation devices. So why all the controversy about

1 *In the Matter of Expanding Consumers' Video Navigation Choices Commercial Availability of Navigation Devices*, Notice of Proposed Rulemaking and Memorandum Opinion and Order (Feb. 18, 2016), https://apps.fcc.gov/edocs_public/attachmatch/FCC-16-18A1.pdf [hereinafter NPRM].

2 Giuseppe Macri, *Set-Top Boxes, Business Internet Regs Punted to Trump FCC*, INSIDE SOURCE (Nov. 18, 2016), <http://www.insidesources.com/set-top-boxes-business-internet-regs-punted-to-trump-fcc/>.

3 NPRM, *supra* note 1 at 8 (citing to statistics compiled by Senators Markey and Blumenthal).

4 *Id.*

5 Gigi Sohn, Counselor to FCC Chairman Wheeler, *The End of Big Cable's Control over Your TV Set-top Box is Nigh*, THE DAILY DOT (June 22, 2016), <http://www.dailydot.com/layer8/unlock-the-box-fcc-gigi-sohn/>.

the NPRM? In part, because it appears to underestimate or overlook several key issues, including the robust competition today in media and media navigation devices (think AppleTV), the practical shortcomings of the proposal, the implications of the NPRM for important individual rights (including intellectual property), as well as the fact that much of today's debate is another round in a multi-decade dispute that earlier FCC regulations not only did not resolve but, according to some, may have made the situation worse.

A. *The History of Attempts to Regulate Set-Top Boxes*

Let's tackle the last issue first. The battle over set-top boxes began in the early 1990s and has been addressed by legislators and regulators many times over. First, in 1995, Congressman Ed Markey (D-MA) and House Commerce Committee Chairman Tom Bliley (R-VA) sponsored a bill to promote set-top box competition that became a part of the Telecommunications Act of 1996. The Act ordered the FCC to "adopt regulations to assure the commercial availability . . . of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming and other services offered over multichannel video programming systems, from manufacturers, retailers, and other vendors not affiliated with any multichannel video programming distributor."⁶

In 1998, the FCC passed an "integration ban" to separate the security and navigation functions in a set-top box. In response, the industry developed the "CableCARD" that could be inserted into any cable box to decrypt the cable signals and interface with a third-party set-top box available for purchase by the consumer and able to navigate channels. This was a perfect solution for all those consumers who wanted not just one, but *two* set-top boxes—one leased and one purchased—sitting elegantly on the top and side of their TVs. The system created no real incentive for cable companies or consumers to adopt the new "two-box" solution, so CableCARD has never really taken off; a recent mandatory filing by the National Cable & Telecommunications Association revealed that only 617,000 CableCARDS have been issued in purchased boxes, as compared to more than 53,000,000 in use in the standard leased boxes most of us have in our living rooms.⁷ Other recent statistics point to similarly meager uptake

of CableCARDS as a retail solution.⁸ The lack of adoption for this regulatory solution strongly suggests that we should consider other alternatives—assuming a change is even needed.

B. *Competition Today is Robust*

The FCC sees a narrow relevant market for set-top boxes, explaining in its proposal that the market includes "access to the multichannel video programming to which consumers subscribe . . ."⁹ This, in turn, means the FCC appears to view the market as beginning and ending with "set top boxes that can access the MVPD ["multichannel video programming distributor"] feed."¹⁰ MVPDs are cable and satellite operators, including Comcast, Time Warner Cable, DirecTV, Charter Communications, and Dish.¹¹ The NPRM implies that MVPDs are the only competitors in the market, and it therefore tries to increase competition by unbundling the MVPD-owned equipment (set-top boxes) from their programming; this approach is similar to the moribund CableCARD proposal and the "integration ban" from the 1990s.¹² Some companies, such as Google, appear to agree with the NPRM's diagnosis and approach to reform.¹³

But the agency's approach underestimates the robust competition *already* present today in online over-the-top (OTT) content provision.¹⁴ Anyone who has recently talked to a friend about the 2016 Emmy Awards or the best new TV shows is probably talking about at least some shows available (perhaps even exclusively) on Netflix, Hulu, Amazon, YouTube, or iTunes.¹⁵ People consume media differently today, with ample options that include successful subscription services like Netflix and Hulu, as well as a la carte services like iTunes.¹⁶ Some companies offer both types of services, such as Amazon, which has both Prime and Video.¹⁷ In addition, third-party set-top box manufacturers exist and are meeting success, including Roku, Google Chromecast, AppleTV, Amazon Fire, PlayStation, Xbox, TiVo and Silcondust.¹⁸ Studies estimate that 21 percent of U.S. households have

6 John Howes, *Today's FCC Action on Cable Boxes, 20 Years in the Making*, PROJECT DISCO at 2 (Feb. 18, 2016), <http://www.project-disco.org/021816/todays-fcc-action-on-cable-boxes-20-years-in-the-making#.V2vugPkrJD8>. Section 629 of the Telecommunications Act provides:

The [FCC] shall, in consultation with appropriate industry standard-setting organizations, adopt regulations to assure the commercial availability, to consumers of multichannel video programming and other services offered over multichannel video programming systems, of converter boxes, interactive communications equipment, and other equipment used by consumers to access multichannel video programming and other services offered over multichannel video programming systems, from manufacturers, retailers, and other vendors not affiliated with any multichannel video programming distributor.

Telecommunications Act of 1996, Pub. L. No. 104-104, § 304, 110 Stat. 56, 125-126 (1996); 47 U.S.C. § 549(a).

7 See Howes, *supra* note 6.

8 See *id.*

9 NPRM, *supra* note 1 at ¶ 13.

10 Scott Wallsten, *An Economic Analysis of the FCC's Set-Top Box NPRM*, TECHNOLOGY POLICY INSTITUTE (Apr. 2016), 4, https://techpolicyinstitute.org/wp-content/uploads/2016/04/Wallsten_An_Economic_Analysis_of_the_FCCs_Set-Top_Box_NPRM.pdf.

11 Anthony Wood, *How the FCC's 'Set-Top Box' Rule Hurts Consumers*, WALL STREET JOURNAL (Apr. 21, 2016), <http://www.wsj.com/articles/how-the-fccs-set-top-box-rule-hurts-consumers-1461279906>; Paul Ausick, *Pay-TV Players Offer Alternative to FCC Set-Top Box Proposal*, 24/7 WALL ST (Jun. 17, 2016), <http://247wallst.com/media/2016/06/17/pay-tv-players-offer-alternative-to-fcc-set-top-box-proposal/>.

12 Wallsten, *supra* note 10 at 4.

13 Wood, *supra* note 11.

14 Over-the-top programming typically refers to content that is provided over a third party telecommunications network.

15 Wallsten, *supra* note 10 at 4-5.

16 *Id.*

17 *Id.*

18 *Id.*

an alternative streaming device, and that 10 percent of U.S. households have completely “cut the cord” and eliminated their MVPD entertainment packages in favor of an OTT service.¹⁹

In addition to these set-top box alternatives, customers can buy set-top boxes that rely on CableCARDs, such as TiVo or Silconust.²⁰ While the market for CableCARD-based devices is relatively small, consumers’ decision to lease from their cable provider rather than buy a box is not necessarily evidence of an anti-competitive market, as has been suggested by some proponents of the FCC’s set-top box proposal. Nor is it unique to the U.S.²¹ A review of 26 MVPDs across 11 OECD countries revealed that all but one require customers to get their set-top boxes from the MVPD.²² Critics of the FCC’s proposal have pointed out that this suggests the relationship between MVPDs and set-top boxes may be an efficient vertical integration; the FCC does not appear to have considered or explored this possibility yet.²³

The many online competitors put pressure on MVPDs with original award-winning content²⁴ and access to content historically available only via MVPDs, such as ESPN.²⁵ Industry leaders like Roku CEO Anthony Wood have explained that today’s media distribution models are highly dynamic and shifting from set-top boxes to application-based streaming platforms on computers, mobile phones, other streaming players, and smart TVs.²⁶ FCC Commissioner Ajit Pai, in his vigorous dissent from the proposed rule, recognizes these positive market developments and notes them as proof that regulatory intervention is unwarranted and counterproductive.²⁷

Despite the evidence of numerous online options, critics of lighter touch regulation in this space have pointed to live sporting events as proof that online providers cannot compete on a level playing field with MVPDs,²⁸ but this concern, too, is evaporating as sports networks like ESPN begin to offer

online packages.²⁹ The FCC noted that “three of the major U.S. professional sports leagues already offer access to out-of-market games over the Internet.”³⁰ Moreover, online competition is not the only disciplining force in this industry. MVPDs themselves are aggressive competitors, and the FCC estimates that 99 percent of households can choose from at least three MVPDs.³¹

The FCC recognizes that the market for video delivery is changing,³² but remains concerned that online alternatives do not offer enough competition for traditional MVPDs.³³ The agency appears to believe this mainly because most households still subscribe to, and lease a set-top box from, an MVPD.³⁴ Critics of the FCC position claim the agency is incorrectly conflating a lack of consumer demand for yet another box (under the CableCARD system) as evidence of a lack of competition.³⁵

II. NATURE OF THE INITIAL PROPOSED RULE

The FCC wants to “empower consumers” with choices and “promote innovation” in available content.³⁶ The FCC’s initial proposal sought to achieve these aims by giving third parties the ability to “build devices or software solutions that can navigate the universe of multichannel video programming with a competitive user interface.”³⁷ The initial rules passed by the FCC for comment in February include a requirement that MVPDs offer three flows of information to third party companies in a format to be developed by a standard-setting body.³⁸ Those information streams include: 1) service discovery information regarding program availability (*e.g.*, channel listings); 2) entitlements information specifying what a device can do with content (*e.g.*, record it); and 3) content (*i.e.*, the actual programming).³⁹

In addition, each MVPD would have to support one content protection system and offer the three flows of information to unaffiliated applications without MVPD-specific equipment.⁴⁰ The proposal also provides that each unaffiliated navigation device must honor copyright and recording limits, public interest requirements such as emergency alerts, consumer privacy, and

19 *Id.* at 6-8.

20 *Id.* at 9.

21 *Id.* at 12-13.

22 *Id.*

23 *Id.* at 21-24.

24 *Id.* at 4 (noting that Netflix, Amazon, and Hulu produce original, exclusive content).

25 *Id.* at 7-8 (noting that Sling TV and PlayStation Vue offer packages with access to a range of channels for a monthly fee, including sports, movie, and foreign channels).

26 Wood, *supra* note 11.

27 *In the Matter of Expanding Consumers’ Video Navigation Choices Commercial Availability of Navigation Devices*, Dissenting Statement of Commissioner Ajit Pai (Feb. 18, 2016), https://apps.fcc.gov/edocs_public/attachmatch/FCC-16-18A5.pdf [hereinafter Pai’s Dissent to NPRM].

28 Tom Govanetti, *With FCC set-top box overreach, time is now for Congress to rein in agency*, THE HILL (Jun. 20, 2016), <http://thehill.com/blogs/congress-blog/technology/283885-with-fcc-set-top-box-overreach-time-is-now-for-congress-to>.

29 Wallsten, *supra* note 10, at 4-5.

30 *Id.* at 7 (quoting FCC, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licensees*, ¶ 83 (Jan. 18, 2011), <https://transition.fcc.gov/FCC-11-4.pdf>).

31 Wood, *supra* note 11, at 4-5.

32 *Id.* at 8 (quoting former FCC General Counsel Jonathan Sallet’s speech at the 2015 Telecommunications Policy Research Conference, which acknowledged the competition and rapid change in this market).

33 NPRM, *supra* note 1, at 9, ¶¶ 14-15.

34 *Id.*

35 Wallsten, *supra* note 10, at 8-9.

36 NPRM, *supra* note 1, at 2.

37 *Id.*

38 *Id.* at 2-3.

39 *Id.*

40 *Id.*

children's programming advertising limits.⁴¹ Licensing terms such as channel placement and advertising will be left to the market. The proposal exempts all cable providers offering only analog services.⁴² A more recent version of the rule, announced in September, would create an FCC-overseen licensing body to administer search and security issues and require development of applications by MVPDs.⁴³

III. AREAS OF CRITICISM AND CONCERN

The FCC proposal has met with widespread criticism from many stakeholders. As a threshold matter, the proposal does not provide any meaningful way to protect content owned by the MVPDs, potentially allowing third party set-top box makers the ability to profit from and use MVPD content (including copyrighted material) without adequate compensation. Some critics have pointed out that the proposal does not address practical matters, such as the development of interoperability standards. It could take years for these standards to be developed. The CableCARD standard took more than four years to develop!⁴⁴ Worse still, video distributors, content creators, and the consumer electronics industry strongly disagree about nearly every aspect of the current proposal, making the probability of their agreeing to a common standard incredibly small.⁴⁵

By the time these parties develop an interoperability standard, consumers will likely have moved well beyond set-top boxes, relying on direct access to content providers through streaming services. The cable industry is pushing in this direction, as seen in an alternative proposal to the NPRM to develop a free downloadable app within two years.⁴⁶ Cable companies already offer packages that allow access to content on streaming players, mobile phones, and other delivery methods that do not rely on set-top boxes.⁴⁷

Several groups have noted that the proposal does not include the kind of protections for consumer data and privacy, including personally identifiable information, that Congress has applied to cable operators.⁴⁸ The NPRM proposes that third party set-top box manufacturers "certify compliance" with these privacy obligations, and there is an open question as to whether state privacy laws would also apply.⁴⁹ The Electronic Privacy Information Center (EPIC) has argued that the FCC should not issue any final rule until the cable privacy rules are "directly applied

to all manufacturers and developers with access to cable subscriber data."⁵⁰ EPIC noted that some third-party device makers already track and collect device and usage data from consumers to allow more targeted advertising.⁵¹

A final criticism of the rule—at least the initial iteration—has been that it would continue to reinforce an entrenched and outdated set-top box access model, possibly resulting in consumers buying or leasing two boxes (as is the case under the CableCARD model). Commissioner Pai⁵² and Republican lawmakers⁵³ have both noted that this would be a logical result of the proposal. In his dissent, Commissioner Pai notes that any proposal should be focused on expediting the move away from old set-top box technology. He has said that "[o]ur goal should not be to unlock the box; it should be to eliminate the box."⁵⁴ Chairman Wheeler, however, has stated that these criticisms are "spreading misinformation" and subsequently advanced an apps-based proposal, described below.⁵⁵

IV. WHERE THE PROPOSAL STANDS TODAY: REVISIONS AND DEFECTION

As of this writing, the FCC's proposal appears to be adrift. In early September, FCC Chairman Wheeler distributed to the Commission a revised proposal for consideration. These proposed rules focus on an apps-based approach, requiring MVPDs to develop and provide free apps allowing consumers to access cable programming on any device.⁵⁶ The FCC would oversee the development of a standard license between MVPDs and device makers.⁵⁷ The proposal is based on an alternative advanced by the cable and satellite industry in mid-June.⁵⁸ The FCC was set to vote on the final rule September 29, but the vote was taken off

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.*

⁴⁴ NPRM, *supra* note 1 at 3-4, ¶¶ 6-7.

⁴⁵ Pai's Dissent to NPRM, *supra* note 27, at 1.

⁴⁶ Lydia Beyoud, *Comcast, DirecTV Pitch Compromise Set-Top Box Proposal*, BLOOMBERG (Jun. 20, 2016), <http://www.bna.com/comcast-directv-pitch-n57982074470/>.

⁴⁷ Wood, *supra* note 11. *See, e.g.*, Time Warner Cable TV Roku Trial, <http://www.timewarnercable.com/en/enjoy/roku.html> (starter package at \$9.99 per month with no TV equipment charge).

⁴⁸ 47 U.S.C. § 551.

⁴⁹ NPRM, *supra* note 1, at 38, ¶ 78.

⁵⁰ *In the Matter of Expanding Consumers' Video Navigation Choices Commercial Availability of Navigation Devices*, Comments of the Electronic Privacy Information Center (Apr. 22, 2016), MB Docket No. 16-42, CS Docket No. 97-80, 1, 6, <https://ecfsapi.fcc.gov/file/60001690745.pdf> [hereinafter EPIC comments to NPRM].

⁵¹ *Id.* at 3-5.

⁵² Pai's Dissent to NPRM, *supra* note 27, at 2 ("In order to carry out the standards called for in this Notice, MVPDs would probably have one of two options. First, they could make substantial changes to their network architecture. Or second, they could provide each customer with an additional box. And during my discussions with MVPDs in the weeks leading up to this meeting, each and every company has told me that it would be less expensive to deploy additional boxes in their customers' homes.").

⁵³ John Brodtkin, *FCC votes to "unlock the cable box" over Republican opposition*, ARS TECHNICA (Feb. 18, 2016), <http://arstechnica.com/business/2016/02/fcc-votes-to-unlock-the-cable-box-over-republican-opposition/>.

⁵⁴ Pai's Dissent to NPRM, *supra* note 27, at 1.

⁵⁵ *Id.*

⁵⁶ Tom Wheeler, *FCC Chairman: Here are the new proposed rules for set-top boxes*, L.A. TIMES (Sept. 8, 2016), <http://www.latimes.com/opinion/op-ed/la-oe-wheeler-set-top-box-rules-20160908-snap-story.html>.

⁵⁷ Brendan Bordelon, *Set-Top Box Rule Set for FCC Vote This Month*, MORNING CONSULT (Sept. 8, 2016), <https://morningconsult.com/2016/09/08/set-top-box-rule-set-fcc-vote-month/>.

⁵⁸ Beyoud, *supra* note 46.

the agenda at the last minute and put on hold indefinitely.⁵⁹ In an announcement following the Commission's November open meeting, the agency noted that the matter would be taken off the agenda until 2017, following the transfer of agency leadership.⁶⁰

The rule, in all its incarnations, has resulted in a lot of activity in Congress, with even Democrat members of the FCC pushing back. During a Senate Commerce Committee hearing, FCC Commissioner Jessica Rosenworcel noted that "I have some problems with licensing and the FCC getting a little bit too involved with the licensing scheme here."⁶¹ She went on to say that "when I look at the Communications Act and Section 629, I just don't think we have the authority."⁶² This is not the first time that Rosenworcel has expressed skepticism, having said in the summer that "it has become clear the original proposal has real flaws. . . We need to find another way forward."⁶³ Her lack of enthusiasm for the plan, combined with the opposition from Commissioners Ajit Pai—who has long said the plan should, if anything, "eliminate the box"⁶⁴—and Michael O'Rielly, strongly suggest the plan would be voted down if a vote was taken today.

But the withdrawal of the set-top box matter from the meeting agenda may not be the end of the story. While not on the agenda, the set-top box proposal is still in circulation at the Commission and could be voted on once there are three votes. This has prompted additional efforts by interested parties. For instance, Commissioner Rosenworcel is up for re-confirmation in the Senate, and this has been used by interested senators to advocate for their positions with her and the agency. Two Democrats appear to have placed holds on her nomination to express frustration with her position on the set-top box rule, and then lifted those holds based on a promise of some near-term action at the FCC.⁶⁵ Republicans in the Senate opposing the proposed rule have held up a floor vote on Rosenworcel to put pressure on Wheeler not to take action before the transfer of agency leadership next year.⁶⁶

Given the change of leadership in Washington and these most recent maneuvers, it is difficult to predict the outcome of the set-top box debate. It is highly unlikely that a proposal similar

to the current one will be implemented. However, given its history and the obvious interest of some industry and consumer advocacy players in the issue, we are likely in the middle of a very long debate about how to monetize the American living room.

59 Seth Fiegerman, *FCC Delays Vote on Controversial Cable Box Plan*, CNN (Sept. 29, 2016), <http://money.cnn.com/2016/09/29/technology/fcc-set-top-box-vote/>.

60 Macri, *supra* note 2.

61 David McCabe, *Dem FCC Member Doubts Agency's Television Box Proposal*, THE HILL (Sept. 15, 2016), <http://thehill.com/policy/technology/296137-key-fcc-member-doubts-agencys-television-box-proposal>.

62 *Id.*

63 Brian Finke, *FCC's cable box plan is "too complicated," says Democrat who voted for it*, ARS TECHNICA (Jun. 21, 2016), <http://arstechnica.com/business/2016/06/tom-wheelers-set-top-box-plan-may-be-losing-democratic-support/>.

64 Pai's Dissent to NPRM, *supra* note 27.

65 John Eggerton, *Hold on Rosenworcel Lifted*, MULTICHANNEL NEWS (Nov. 18, 2016), <http://www.multichannel.com/news/fcc/hold-rosenworcel-nomination-lifted/409209>.

66 *Id.*

