Bloomberg BNA

Telecommunications Law Resource Center

VOL. 2016, NO. 28 MAY 31, 2016

What is the True Cost of a Set-Top Box?

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Under Section 629 of the Telecommunications Act of 1996, the Federal Communications Commission (''FCC'') is directed to take steps to create a retail market for cable set-top boxes. Over the past two decades, the Commission has tried twice to do so. Despite imposing an estimated $1 billion in costs on the American consumer, the FCC's repeated efforts have proved futile.

The reason for this billion-dollar policy dud lies in the simple fact a retail market for set-top boxes is inefficient, and markets abhor inefficiency. Neither consumers nor the cable industry want a set-top box. The boxes are a nuisance to consumers and impose a huge cost on the industry. Set-top boxes are, unfortunately, a necessary evil to guard against signal theft and to protect copyrighted content.

Believing that government regulation can overcome the laws of economics, last February the FCC decided to take another bite at the apple. This time, the Commission came at the problem with guns blazing: Under its new proposal, cable and satellite companies have to make available to third-party equipment providers: (1) channel listings; (2) information about what a device is allowed to do with content, such as record it; and (3) the content itself. Fully understood, however, it is readily apparent that the Commission wants to do far more than just create a retail market for third-party set-top boxes; what the FCC wants to do is create a whole new class of virtual video distributors who profit from the use of others' intellectual property without having to pay for it and without any regulatory oversight.

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As would be expected, potential device makers like Google are grinning like the Cheshire Cat, while content creators and video distributors are apoplectic. FCC Chairman Tom Wheeler, however, doesn't appear to care. In a recent interview with industry analyst Craig Moffett, Mr. Wheeler described the concerns of multichannel video providers and copyright owners about signal theft, piracy, and privacy as ''baloney.''

Bogus Numbers At the heart of Mr. Wheeler's advocacy is his persistent claim that a set-top box costs $7.34 per month, or $231 per year, per subscriber, for a total annual expenditure of $20 billion. Curiously, instead of turning to the talented staff and resources at the FCC to derive this number—a task which sits squarely on the expert agency's jurisdictional porch—Chairman Wheeler got his data about the price of a set-top box from Senators Richard Blumenthal and Ed Markey.

Unfortunately, the Senators' numbers are bogus. If you bother to actually look at the information provided by Senators Blumenthal and Markey in response to their informal survey, the best guess for the price of a set-top box is $5.15 per box, or $145 per year, per subscriber, not $231 per year. Total expenditures on the boxes sum to about $12 billion annually. This proper analysis of the Blumenthal-Markey data is public, and no rebuttal has been registered. Thus, the set-top box prices reported by the Senators, and cited repeatedly without due diligence by the Chairman (among many others, including the President of the United States), can't be supported from the evidence. The result: the FCC Chairman unwaveringly points the public to a price that is overstated by a whopping 60 percent. In light of the available evidence, I think it's fair to be blunt: When you see the $231 figure bandied about by proponents of Mr. Wheeler's set-top box proposal, know that you are being misled. The $231 figure is baloney.

Worse yet is that these prices are described by the Chairman as being ''high prices.'' Others have derided the prices as ''hideously vexing'' and an ''abuse of market power.'' Such allegations imply the price is well-above some measure of the ''correct'' price. But the Chairman has provided no evidence on what the ''correct'' price of a set-top box is. Perhaps Mr. Wheeler is waiting for Senators Blumenthal and Markey to do his work for him. They haven't, so I will.

Set-Top Box Prices are not "Too High" To argue that the price of set-top box is too high, you need a reference point that reflects the ''correct'' price. There are at least three possibilities.

First, we could compare prices to some measure of cost. Fortunately, we can do that. The cost of a set-top box is $8.65. How do I know that? I looked it up on a typical provider-filed copy (this one from the provider serving Saugerties, N.Y.) of the FCC's Form 1205—*the FCC's own form that implements the Commission's formal methodology for determining the cost of a set-top box*. The particular cost figure was deemed valid by agency staff through February 2016. Why the Chairman is reluctant to rely on data developed by the federal agency he leads is unclear. Perhaps his desire to regulate the video industry is better supported by merely presuming that set-top box prices are ''too high'' rather than by sifting through what is certainly a mountain of actual data held at the Commission.

Second, if the government thinks the price is ''too high,'' then we might ask ''what would the government charge for a set-top box?'' After all, it is the government that appears to be upset about the price. In an earlier study, I compared the price of set-top boxes charged by private providers to prices charged by municipally-owned and operated video systems. The prices are essentially the same, suggesting that set-top box prices are not ''too high,'' at least if we accord municipal broadband networks the same high level of respect that Chairman Wheeler does (and not, as others have said, as subsidized predators.)

Third, we could look at set-top box prices in competitive video markets as a benchmark. Since multichannel video markets are already and essentially ubiquitously competitive (most consumers have at least three choices), it's the case that the prices currently charged by any video provider are consistent with the competitive outcome.

An App-Based Approach It should be apparent to anyone that the days of the traditional set-top box are over. Video distributors have no perverse incentives with respect to the set-top box. Cable companies, like consumers, hate the things. In fact, set-top equipment is the largest annual capital expenditure for cable operators. Comcast's annual financial report indicates it spent $3.7 billion on customer premises equipment, compared to only $2.4 billion on its distribution network. Yet, the box offers no unique value to consumers that renders the investment worth making. The value of video service does not rise because a set-top box is required. In fact, a set-top box probably reduces the value of video service on average. There's no value, and thus no profit, in set-top boxes.

Like it or not, the set-top box is, at least historically, an essential part of the network—a necessary evil. If the cable industry can get rid of the box, then its profits will rise. For this reason, the industry is working towards an apps-based approach that would eliminate the need for a set-top box without sacrificing the security necessary to protect carefully negotiated programming contracts, prevent digital piracy, and deter signal theft. Accordingly, it should come as no surprise that Charter, and now Comcast (among other video providers), have already announced and implemented application-based alternatives to the set-top box. In fact, the industry made an offer to the FCC to move to an applications-based model and eradicate the set-top box, but the FCC denied the offer. Instead, the Commission came up with a Google-sponsored plan that will not eliminate the set-top box at all, but require consumers to get additional equipment, thereby facilitating the manipulation of the content and the monetization of consumers' private viewing habits.

Conclusion The multichannel video industry and the consumer would love to be rid of the set-top box, and the industry has offered a path forward. Why doesn't the FCC take the easy path? Why not let the industry eliminate the set-top box and put Section 629 to bed (which the 1996 Telecommunications Act specifically permits)? Why not embrace an app-based approach that the video industry, copyright owners, and consumers all prefer?

Apparently, the Obama Administration has some other objective in mind. Given Mr. Wheeler's repeated and unwavering use of bogus numbers and his failure to conduct any serious investigation into the role of the set-top box in the video industry, perhaps it's time for consumers and Congress to take a look behind the veil to see what the Administration might be hiding.

