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Opening the Internet to Regulation II: How Set-Top Box Merger Conditions Foreshadow Broadband Content Controls

by

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Over the last several weeks the FCC has assumed expansive new powers of regulation over broadband Internet services and broadband-delivered video content. In December the Commission issued its broadband Internet services regulatory framework. And in January the Commission issued its order subjecting the Comcast-NBCU merger to numerous regulatory conditions. Through these respective agency actions, the FCC now assumes oversight authority over aspects of broadband Internet services previously left to the free market.

My recent *FSF Perspectives* paper, "[Opening the Internet to Regulation: Assessing Risks of the FCC's Failure to Limit Its New Power](#)," pointed out significant problems with the Commission's self-grant of expansive new powers under its broadband Internet services regulatory framework. This paper focuses on some problematic implications of regulatory conditions imposed on Comcast-NBCU by the FCC in its recent merger order. In particular, the FCC's regulatory conditions regarding Comcast-affiliated set-top boxes point more toward future regulation of broadband-delivered content than perhaps previously appreciated.

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Set-top box regulation and network neutrality regulation have been and remain somewhat separable issues. The former primarily involves government mandates for devices provided by cable companies for accessing and navigating video services. And the latter primarily involves government mandates on how broadband Internet providers manage data traffic on their networks. But the set-top box conditions in the merger order have an interesting relationship with the FCC's recently-adopted broadband Internet framework as well as the FCC's recently-proposed "AllVid" regulation for video navigation devices. The Comcast-NBCU set-top box regulatory conditions suggest that the FCC is inclined toward expanding its regulatory authority to applications and content under its broadband Internet framework and under its "AllVid" proposal.

By imposing set-top box conditions on Comcast's "specialized services," the FCC extends regulatory control to an area that the FCC's broadband Internet services framework leaves untouched. This suggests the agency may be eager to expand regulation under its new framework and to scale back even the modest limits on government intervention in the broadband marketplace that were set out in the framework.

Also, FCC-imposed conditions regarding set-top box search and display functionalities insert government regulators into the area of broadband-delivered applications and content. The FCC's broadband Internet services framework, however, will supposedly provide a carve-out for "edge provider" content and applications. In the context of broadband-delivered video, set-top box search and display functionalities bear characteristics of applications and content. This again suggests the agency's willingness to extend its regulatory reach beyond the scope of the framework.

Moreover, FCC-imposed set-top box conditions regarding search and display functionality mirror the FCC's "AllVid" proposal for future regulation of set-top boxes and other video navigation devices. Thus, the set-top box conditions imposed in the merger order could be a set-up for forthcoming, identical industry-wide rules.

Set-Top Box Conditions in the Comcast-NBCU Order

On January 20, the FCC released its order imposing numerous regulatory conditions in conjunction with its approval of the Comcast-NBCU merger.¹ Significantly, the merger order included an extensive set of regulatory conditions regarding access to online video programming.² For instance, the FCC assumes regulatory oversight over the Comcast-NBCU's business practices and dealings involving online video distributors (OVDs) that use Internet or other IP-based transmission paths to provide consumers with video programming. The FCC also required that Comcast-NBCU continue to provide video programming content over nbc.com and that it "renew its agreements with Hulu on substantially the same terms and conditions."³

The regulatory conditions contained in the merger order bind only Comcast-NBCU. But they could also be the prelude to the agency's pursuit of more broad-based regulation along those same lines. For example, the FCC could attempt industry-wide regulation of OVDs. The merger order's unique mandates for set-top boxes may also be a signal for broader rules that could come next.

Like many cable companies and other multichannel video programming distributors (MVPDs), Comcast leases set-top boxes to its subscribers. Although Comcast is already subject to cable industry-wide set-top box regulation, the FCC imposed special regulatory conditions regarding Comcast-affiliated set-top boxes as part of its merger order. The conditions are based on the agency's own claim that it is "concerned that to protect its newly increased holdings in affiliated video programming, Comcast will have a heightened incentive to harm video distribution competition by using its new IP-enabled STBs [set-top boxes] to discriminate against online content that its MVPD subscribers attempt to view via the STB."⁴ To the extent that Comcast-affiliated set-top boxes, other devices, or even software performing similar functions in place of equipment enable subscribers to receive broadband Internet access, Comcast cannot prioritize Comcast-affiliated online video traffic over non-affiliated video traffic.⁵

The FCC also imposed similar regulatory conditions on so-called "specialized services" — services using the same facilities used to deliver broadband Internet access but which are not broadband Internet access services, cable TV services or VoIP telephony services.⁶ To the extent that Comcast-affiliated set-top boxes let subscribers access specialized services, such services cannot exclusively or substantially offer Comcast-affiliated video content.⁷ Rather, Comcast must allow access to comparable third-party video content on a nondiscriminatory basis.⁸

In addition, the FCC even imposed conditions on Comcast-affiliated set-top box search retrieval and display functions. As the order states: "If Comcast-affiliated STBs employ a search function to navigate programming on the public Internet, they must display search results in a non-discriminatory manner."⁹ The FCC doesn't require that a particular search algorithm be used, but any search function must be "based on a non-discriminatory approach consistently applied (e.g., alphabetical, ratings)."¹⁰

To better grasp the direction that FCC regulation is heading, it is necessary to put the Comcast-NBCU set-top box regulatory conditions into the broader context of other FCC regulatory actions.

Set-Top Box Conditions and the FCC's Broadband Internet Regulatory Framework

Consider the Comcast-NBCU set-top box conditions in light of the FCC's broadband Internet services regulatory framework. Back on December 21, the agency adopted its controversial regulatory framework for overseeing broadband Internet services.¹¹ Under the framework, government regulators will for the first time decide which network management practices are reasonable and what kinds of practices by different kinds of providers deserve special exemptions or carve-outs.¹²

The merger order requires that the basic rules of the FCC's broadband Internet services regulatory framework apply with respect to Comcast-affiliated set-top boxes that allow subscribers to access video via the Internet.¹³ But the merger order imposes requirements that go beyond those mandated by the FCC's framework with regard to specialized services. The FCC's framework does *not* impose any specific requirements on broadband Internet service providers regarding specialized services. Instead, the agency says it will "exercise its authority to closely monitor and proceed incrementally with respect to specialized services."¹⁴ In the merger order, however, the FCC imposes a non-discrimination requirement with respect to specialized services.¹⁵

Thus, in just one month's time since the release of its framework for regulating broadband Internet services, the FCC has already taken one incremental step forward in subjecting specialized services to regulation.

And the merger order's requirements appear to go beyond the FCC's framework in another important respect. The rules set out in the FCC's framework are said to "apply only to the provision of broadband Internet access service and not to edge provider activities, such as the provision of content or applications over the Internet."¹⁶ But although the merger order's search and display function requirements are applied to a provider of broadband Internet services (Comcast), search and display functionalities certainly bear characteristics associated with applications and content.

Defining applications and content and distinguishing them both from core network functions may not be an easy call in every instance. As FCC Commissioner McDowell pointed out when network neutrality regulations were first proposed in late 2009, with respect to applications and networks, "the market is sparking unprecedented convergence between two."¹⁷ McDowell continued by stating that with regard to the edge and core of networks, "[a]s a practical matter, it is fast becoming impossible to separate the two."¹⁸ These concerns prompted McDowell to ask:

Is the Commission suggesting today that the government draw a bright line of distinction between networks and applications in an effort to justify regulation in this space? If so, should not the Commission refine its view because networks and applications are converging faster than regulators can measure? Otherwise, would the Commission not be favoring one market player over another absent evidence of an abuse of market power?¹⁹

As I wrote in my prior *FSF Perspectives* paper assessing the broadband Internet services regulatory framework that the FCC ultimately adopted, the FCC risks opening the Internet to arbitrary and capricious regulation by favoring one set of Internet actors over others without a requirement for finding market power problems or consumer harm.²⁰ The FCC's framework establishes non-exclusive and difficult to distinguish categories for Internet "edge providers" and "end users." It treats "edge providers" differently and more favorably than all other "end users" for purposes of judging the

lawfulness of Internet market transactions and pricing arrangements with broadband Internet service providers. And future regulatory enforcement will only be limited by the FCC's own regulatory judgments about what kinds of restrictions will best further the agency's "broad purposes."

Commissioner McDowell's concerns, confirmed by the FCC's broadband Internet services regulatory framework, are now re-confirmed by the Comcast-NBCU merger order. Designing search algorithms, displaying search results, and providing menu guides involve exercises of editorial judgments by MVPDs. And by its imposing regulatory conditions on video search and display functionalities provided by Comcast-affiliated set-top boxes, the agency ventures into regulatory controls over applications and content.

The merger order's set-top box search and display functionality regulatory conditions may not constitute an industry-wide rule or even a case precedent under the FCC's new framework. But those conditions are a concrete realization of the search and display functionality aspect of the FCC's "AllVid" proposal for regulating set-top boxes and other video navigation or "smart video" devices. Could a similar, industry-wide rule for search and display functionalities be far behind?

Set-Top Box Conditions and the FCC's AllVid Regulatory Proposal

AllVid is the FCC's proposed new regulatory regime for video navigation devices that will supplant existing cable set-top box regulation. At the core of AllVid is a proposed requirement that all MVPDs use and make available to subscribers a special "adapter." The Allvid adapter must operate as a "set-back" device containing certain functionalities (such as access, provision, decoding, and reception) to connect to all video navigation devices (including those manufactured by companies unaffiliated with MVPDs).²¹ Alternatively, MVPDs must use an AllVid adapter as a "gateway" device for allowing all consumer electronic devices to access MVPD services.²²

We have written previously about what's wrong with government designing technological devices — particularly with regard to set-top box and other video navigation devices.²³ And in a recent blog post I reiterated that present-day dynamic market conditions in the video delivery market render regulations unnecessary and problematic.²⁴ But it is important to emphasize here that AllVid's proposed regulation goes far beyond government-mandated device hardware specifications. AllVid regulation of video navigation devices includes government mandates for communications protocols, encryption and authentication standard, audi-visual codecs, as well as ordering and billing methods. If the FCC takes the approach it took in the Comcast-NBCU merger order, AllVid regulation would apply to MVPDs even if video navigation functionalities are provided in the network cloud and no video navigation device is even used.

Of course, AllVid also includes government mandates for programming guides and search functionality. In its AllVid Notice of Inquiry, released on April 21, 2010, the FCC proposes that "the smart video device would perform navigation functions, including

presentation of programming guides and search functionality."²⁵ The FCC contends that "[t]his approach would provide the necessary flexibility for consumer electronics manufacturers to develop new technologies, including combining MVPD content with over-the-top video services...manipulating the channel guide, providing more advanced parental controls, providing new user interfaces, and integrating with mobile devices."²⁶ This means MVPDs would have to provide the means for allowing unaffiliated electronic equipment manufacturers to disaggregate MVPD programming and services so as to allow for the rearranging, editing, and supplementing of MVPD programming and services for navigation and viewing with unaffiliated devices. The agency sought public comment on "whether the Commission should adopt rules governing the way in which MVPD content is presented."²⁷ As part of its National Broadband Plan action agenda, the FCC is planning to issue proposed AllVid regulations sometime in the near future.

AllVid regulation of search functionality and display menu configurations also raises jurisdictional and constitutional difficulties. Serious doubt exists that the Commission's delegated authority under Section 629 of the Telecommunications Act of 1996 is expansive enough to allow sweeping regulation such as AllVid. First Amendment protections for the programming editorial judgments made by MVPDs would be triggered by AllVid. And Fifth Amendment regulatory takings would be implicated by AllVid's regulatory requirements that MVPD products and services be opened up and made available to unaffiliated electronics equipment manufacturers.

Conclusion

Regulatory conditions contained in the FCC's order approving the Comcast-NBCU merger constitute a significant expansion of agency authority. Under the merger order, the FCC now has regulatory oversight over online video distribution business dealings as well as broadband-delivered and specialized service video programming offered through Comcast-affiliated set-top boxes. But the set-top box regulatory conditions are also a significant signal of how agency authority may be further expanded in the near future. Those regulatory conditions go beyond the FCC's broadband Internet services framework in important respects. And they could be the prelude to industry-wide regulation under the FCC's AllVid proposal. If the approach taken by the FCC in the merger order is carried out in AllVid, the FCC will be creating a meticulous regime of regulation for video navigation devices, spanning device, protocol, applications and content layers.

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¹ See Federal Communications Commission (FCC), Memorandum Opinion and Order ("merger order"), *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licenses*, MB Docket No. 10-56, at 119-144

(January 20, 2011) (Appendix A: Conditions), available at:

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-4A1.pdf.

² See *id.* at 122-127 ("IV. Online Conditions").

³ *Id.* at 125 (IV. C. 1 and 2).

⁴ *Id.* at 40, para. 97.

⁵ *Id.* at 40, para. 97. See also *id.* at 38, para. 94.

⁶ *Id.* at 40, para. 97.

⁷ *Id.* at 40, para. 97. See also *id.* at 39, para. 95.

⁸ *Id.* at 40, para. 97.

⁹ *Id.* at 40, para. 99.

¹⁰ *Id.* at 40, para. 99.

¹¹ FCC, Report and Order ("Internet framework"), *In the Matter of Preserving the Open Internet*, GN Docket No. 09-91, WC Docket No. 07-52 (December 23, 2010), available at:

http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1223/FCC-10-201A1.pdf.

¹² For a critical analysis of the FCC's broadband Internet regulatory framework, see Seth L. Cooper, "Opening the Internet to Regulation: Assessing Risks of the FCC's Failure to Limit Its New Powers," *Perspectives from FSF Scholars*, Vol. 6, No. 4 (January 21, 2011), available at:

http://www.freestatefoundation.org/images/Opening_the_Internet_to_Regulation_Assessing_Risks_of_the_FCC_s_Failure_to_Limit_Its_New_Powers.pdf.

¹³ Merger order, at 40, para. 97. See also *id.* at 38, para. 94.

¹⁴ Internet framework, at 61-62, para. 113. See also *id.* at 61, para. 112.

¹⁵ Merger order, at 40, para. 97. See also *id.* at 39, para. 95.

¹⁶ Internet framework, at 30, para. 50.

¹⁷ Statement of Commissioner Robert M. McDowell (Concurring in Part, Dissenting in Part), *In the Matter of Preserving the Open Internet*, GN Docket No. 09-191, WC Docket No. 07-52 (October 22, 2009), at 2.

¹⁸ *Id.* at 3.

¹⁹ *Id.* at 3.

²⁰ See Cooper, "Opening the Internet to Regulation," *FSF Perspectives*, *supra* note 12.

²¹ FCC, Notice of Inquiry ("AllVid NOI"), *In the Matter of Video Device Competition*, MB Docket No. 10-91, CS Docket No. 97-80, PP Docket No. 00-67, at 1, para. 2 (April 21, 2010), available at:

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-60A1.pdf.

²² AllVid NOI, at 1, para. 2.

²³ See, e.g., Seth L. Cooper, "The FCC's Continuing, Costly Video Navigation Device Regulation," *Perspectives from FSF Scholars*, Vol. 5, No. 25 (October 21, 2010), available at:

http://www.freestatefoundation.org/images/The_FCC_s_Continuing,_Costly_Video_Navigation_Device_Regulation_102010.pdf; Seth L. Cooper, "Government Shouldn't Design Devices in Dynamic Markets,"

FSF blog (September 23, 2010), available at:

<http://freestatefoundation.blogspot.com/2010/09/government-shouldnt-design-devices-in.html>.

²⁴ See Seth L. Cooper, "FCC's 'AllVid' Regulation of Video Devices All Wrong," *FSF blog* (January 26, 2011), available at: <http://freestatefoundation.blogspot.com/2011/01/dynamic-market-makes-fcc-regulation-of.html>.

²⁵ AllVid NOI, at 2, para. 2.

²⁶ AllVid NOI, at 8, para. 17.

²⁷ AllVid NOI, at 16, para. 43.