

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of

Restoring Internet Freedom

WC Docket No. 17-108

**COMMENTS OF QUALCOMM INCORPORATED**

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QUALCOMM Incorporated (“Qualcomm”) is pleased to comment on the FCC’s Restoring Internet Freedom *Notice of Proposed Rulemaking*<sup>1</sup> that recommends reinstating the light-touch regulatory framework for wireless services, which successfully governed the dynamic and burgeoning mobile broadband ecosystem since the 1990s and protected consumers. The light-touch framework protected wireless consumers by ensuring an open internet, drove job creation, innovation, and growth in all sectors of the American economy, and enabled the creation of new business models, countless new wireless services, applications, and capabilities. The prior regulatory framework, rather than Title II, struck the proper balance among these important policy objectives and should be reinstated.

Above all, the FCC should not be in the business of favoring or disfavoring certain business models in the highly competitive mobile industry. The FCC should allow consumers to enjoy the benefits of new wireless business models, which enable new services, new applications, and new applications, while ensuring that the Internet is open for all and protecting

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<sup>1</sup> See Restoring Internet Freedom, WC Docket No. 17-108, *Notice of Proposed Rulemaking*, FCC 17-60 (May 23, 2017) (“*NPRM*”).

consumers from any abusive conduct. The FCC should reinstate the prior regulatory framework for wireless, which did just that.

## **INTRODUCTION AND SUMMARY**

The FCC's light-touch regulatory approach, which was in place up until the agency's 2015 *Title II Order*, allowed new wireless services to come to market for consumers, such as so-called sponsored connectivity offerings, and afforded wireless operators the necessary flexibility to dynamically manage their networks on limited bandwidth in the face of constantly increasing and varying consumer data demands. The light-touch regulatory framework avoided FCC regulation of wireless business models or pricing plans and thus fueled the development of exciting new business models, devices, applications, and services for American consumers.

Spectrum, the mother's milk of mobile broadband networks, is a finite resource, and, therefore, the bandwidth that mobile broadband networks must allocate among users is inherently limited. The FCC's pre-2015 regulatory framework recognized this characteristic of mobile broadband networks and adopted regulations that treated mobile with a light-touch. Qualcomm believes that the FCC should not have changed course and attempted to closely regulate mobile broadband offerings. Such an approach is inherently arbitrary and is not justified by the robustly competitive nature of the American wireless market.

New and innovative mobile broadband business models and pricing plans, including those that are bundled with devices themselves and allow free access to particular services or are based on bandwidth usage, offer exciting options for consumers and can appropriately manage spectrum access. These business models and pricing plans are sensible forms of bandwidth conservation that were permitted under the pre-2015 regulatory framework. Mobile broadband providers require the utmost flexibility to manage use of their finite spectrum resources via an

unconstrained array of tools that involve combinations of technology, price, network topology, and system design tools to meet user demands that are increasing exponentially and often are changing from moment to moment and place to place. As the FCC itself observed numerous times under the pre-2015 regulatory policy, mobile service providers compete vigorously on price and various non-price factors, such as network upgrades, product performance, user perception, and service offerings, which includes new and innovative devices, applications, and pricing plans.<sup>2</sup> Heavy-handed regulation of this vibrant ecosystem is counterproductive.

## **DISCUSSION**

### **I. Light-Touch Regulation Enabled Innovative Network Management Practices And Allowed The Mobile Ecosystem To Become A Robust Engine Of Economic Growth And Competition**

The *NPRM* appropriately reflects upon the remarkable success of the FCC's pre-2015 light-touch wireless Internet regulatory policy. That policy should be reinstated by the Commission in this proceeding. Innovation in mobile connectivity and in portable computing devices thrived for more than two decades under the prior framework, which helped create a vibrant wireless ecosystem that drove economic growth and increasing levels of investment.<sup>3</sup> Whole new classes of wireless devices, many using Qualcomm inventions, were introduced into the wireless ecosystem and delivered exciting new applications and services to consumers.

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<sup>2</sup> See, e.g., Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, WT Docket No. 11-186, *Sixteenth Report*, FCC 13-34 at ¶ 15 n.78 (rel. Mar. 21, 2013).

<sup>3</sup> See *NPRM* at ¶¶ 24, 27-28; but see *id.* at 44 (“As providers ... devoted more resources to complying with new regulations, the threat of regulatory enforcement of vague rules and standards has dampened providers’ incentive to invest and innovate.”).

The Title II Order provided scant evidence to justify imposing Title II regulations on mobile broadband providers.<sup>4</sup> To the contrary, as Qualcomm and others in the wireless industry have explained, given the ferociously competitive mobile broadband ecosystem, there was no incentive for providers to act in commercially unreasonable ways. The FCC's 2011 rules offered a framework for ensuring the absence of abuses, and antitrust and tort laws also will deter and punish such misconduct, as the *NPRM* notes.<sup>5</sup>

To handle the growing number of devices, applications and services running on today's mobile networks, mobile broadband operators need to constantly adjust traffic management and routing algorithms to manage access to the limited spectrum resource. As one of the technology developers advancing the science of spectrum access in order to increase the capacity of mobile broadband networks, Qualcomm knows firsthand the importance of giving wireless network operators the utmost flexibility in implementing network management tools for their mobile networks have to support an entire population of users in a limited amount of spectrum.

Wireless broadband network management is an extraordinarily complex undertaking that requires increasing levels of flexibility. Each user's mobile broadband connection is affected by RF noise, multipath, and signal blockage conditions, and these impairments vary by time and location and occur randomly. The harsh realities of the RF environment coupled with the limited bandwidth within which these networks must operate introduce added complexity and variability into the wireless broadband ecosystem and impose increasing challenges upon service providers to provide the best service to the greatest number of users. Truth be told, the mobile Internet's

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<sup>4</sup> There was no evidence that mobile providers had behaved in commercially unreasonable ways prior to 2015. In fact, the non-discrimination rule the FCC imposed in 2010 did not apply to mobile broadband, and there was no evidence of abuse by mobile broadband providers.

<sup>5</sup> See, e.g., *NPRM* at ¶¶ 78-79, 84.

future openness directly depends upon the development of ever-improving traffic management techniques and infrastructure improvements that are readily available under a light-touch framework.

**A. The Prior Light-Touch Regulatory Framework Helped Make The Mobile Broadband Ecosystem A Highly Successful Incubator Of Innovation**

The Commission should reinstate the prior light-touch regulatory framework for it will engender the development of new and innovative wireless business models that are critically important to continued investment and innovation in the mobile broadband ecosystem. Indeed, if the true goal of this proceeding is to ensure that Internet access services continue to serve as a platform for investment, innovation, and civic engagement, returning to the framework under which the mobile Internet grew and flourished at an unprecedented rate is sound policy.

As Qualcomm explained above, the mobile ecosystem occupies a unique area within the broadband Internet space, for it relies upon a finite resource — wireless spectrum — that must be shared among a large population of users and uses. This fact requires mobile network operators to have the utmost flexibility to manage access by users through an unconstrained array of bandwidth conservation tools. And, as wireless connectivity is embedded into more and more devices, even greater flexibility in network management will be needed to manage the still nascent, yet increasingly complex and dense, mobile broadband ecosystem. In order to offer increased choices to consumers, the FCC must continue to allow the scarce spectrum resource to be conserved via any reasonable economic and technical means. Thus, operators must be able to implement any combination of technological, pricing, and system design tools to conserve bandwidth and satisfy exponentially increasing user demands.

**B. The FCC Should Permit Any And All Mobile Broadband Pricing Plans And Data Connectivity Models To Advance Universal Broadband Connectivity**

Mobile broadband network providers should be allowed to offer any number of consumer-focused data plans and pricing models without any threat of government regulation. There is no question that the “Commission’s historical information service classification better enable[d] flexibility in marketplace offerings.”<sup>6</sup> Reinstating the light-touch regulatory policy in the mobile broadband space will facilitate the development of new business models to spur adoption of broadband connectivity.

Mobile providers should be allowed to charge heavy data users less per unit of data than light users. They also should be able to charge more for real-time high-definition video uploads and other bandwidth intensive applications than for uses that do not require real-time communications or use less bandwidth. In addition, operators should be able to offer unlimited data plans to users who want to pay for such plans and offer more limited plans to other users who wish to buy bandwidth on-demand for a single device or collection of devices. These pricing models are consumer-friendly and encourage bandwidth conservation, which is essential to supporting the rapidly growing number of users and their skyrocketing mobile data demands. There is no sound technical, legal, or policy reason for FCC regulation that leads service providers to deny such choices to consumers.

Sponsored connectivity approaches, which support the sale of a variety of wireless-enabled devices, such as cellular-enabled tablets, e-readers, smartphones, and gaming devices without a data plan, present another useful means of managing spectrum access. Here, service providers or third party content providers sell content or services on a pay-as-you-go basis to

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<sup>6</sup> *NPRM* at ¶ 39.



consumers owning the devices. Consumers gain access to content or services without having to enter a contract with a wireless service provider. Sponsored connectivity approaches allow wireless operators to offer, through third parties and direct-to-consumer channels, broadband connectivity to wireless devices, like e-readers, personal navigation devices, photo frames, and gaming devices.

Operators also must be permitted to offer broadband connectivity to wireless devices that support a defined collection of applications, such as social networking, gaming, books and magazines, home energy control, or a patient medical application. These devices can be supported via a limited data plan, a sponsored connectivity approach, or some other type of service plan. These consumer-focused business models provide users the content and services they desire. And, providing consumers with a broad array of options of accessing mobile data helps to introduce those individuals who may otherwise avoid broadband connectivity to the value provided by the service.

By way of example, users unwilling to sign up for broadband Internet access may decide to purchase a device that performs a limited function using broadband connectivity, such as a home energy control device, a fitness device, an e-reader, or a mobile personal emergency response dongle. Encouraging the deployment of these and other types of mobile devices, services, and applications will help to close the digital divide by ensuring that more Americans understand the benefits of broadband connectivity and are encouraged to use such services in furtherance of universal broadband connectivity. The pre-2015 light-touch regulatory policy for mobile broadband worked well to facilitate a wide range of business models and uses for mobile broadband-enabled devices to achieve these important national purposes.

## **CONCLUSION**

Qualcomm encourages the Commission to reinstitute the prior highly successful, light-touch regulatory framework for mobile broadband that stimulated robust innovation and intense competition for decades. Doing so will allow the wireless industry to focus its full attention on building a high-performance America — a more productive, creative, and efficient economic engine where affordable broadband is available everywhere to everyone so Americans can take full advantage of and improve upon the countless valuable mobile broadband applications and service opportunities.

Respectfully submitted,

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