

The Commission's Net Neutrality Rules are Not Appropriate for Wireless Broadband

The Commission's recent Notice of Proposed Rulemaking on Net Neutrality contemplates imposing six new rules on wireless networks designed to "preserve the open Internet." However, because the Commission has not adequately considered the impact these wireline-centric rules will have on wireless, application of net neutrality rules to the vibrant and innovative wireless ecosystem would risk injecting uncertainty into a thriving part of the struggling U.S. economy and could have unintended negative consequences for consumers.

Net Neutrality Rules Will Have Unintended Consequences:

- As the Commission's decision to impose "open access" obligations on the 700 MHz C Block license, the imposition of net neutrality on wireless will inject uncertainty into the market.
- Similarly, as the "open access" rules did in the 700 MHz C Block, imposition of net neutrality will have an impact on investment.
 - In the 700 MHz band, for example, the C Block (a 22 MHz band made up of 4 licenses covering the continental U.S.) sold for approximately half the price of the B Block (a 12 MHz band made up of 734 licenses covering the same area).
 - In the west alone, the C Block license that covers the entire west coast sold for \$164 million less than the B Block license covering only the Los Angeles, CA area.
- As a result of the interdependent nature of the wireless ecosystem, the impact of the Commission's application of net neutrality rules will not be confined to access providers.
- The net neutrality rules could ultimately harm consumers by impacting what is the most competitive wireless market on the planet.
 - The United States is now the largest mobile data market.
 - The United States has the lowest revenue per minute and the most competitive wireless market of all 26 OECD countries tracked by Bank of America/Merrill Lynch.
 - The majority of new, advanced wireless devices are launched in the U.S. (e.g. iPhone 3GS, T-Mobile MyTouch, Palm Pre, Motorola Droid, etc.).

The Commission Has Not Made the Case for Regulation:

The action proposed by the Commission is purely speculative. None of the examples given by the Commission and supporters of net neutrality cited as evidence of the need for net neutrality regulation have occurred on wireless networks. There simply is no need for the Commission's proposed regulation.

Wireless Networks are Different:

Wireless networks are inherently different than the networks for which the Broadband Policy Statement and the subsequent net neutrality rules were developed. The Commission has consistently acknowledged such a difference and as such should recognize the unique aspects of wireless that militate against applying wireline net neutrality rules to a wireless world.

The underlying network infrastructure, including spectrum, as well as the integration of customer equipment, make wireless significantly different from wired broadband networks:

- **The capacity of a wireless cell site is shared between all users in that cell.** The wireless user must share the available bandwidth with other users in their vicinity.
- **The capacity of a cell is shared between all services running over the network.** Wireless voice and data use share the finite capacity of the cell.

- **Wireless providers cannot “build their way out” of spectrum constraints.** Unlike wired services that can add capacity through greater buildout, constraints on expansion of network capacity are a reality for spectrum-based services. In the absence of significant additional spectrum allocations, wireless networks must be managed to maximize the consumer benefit from their network provider.

Because of these differences, spectrum-based services such as mobile broadband require careful management of scarce network resources.

- The harm that wireless carriers seek to prevent is not harm to an inanimate network, rather, **carriers manage networks to the benefit of consumers.**
- **Close cooperation between the network core and the innovative devices that comprise its edges,** including reasonable network management methods, ensure a robust, high-quality consumer experience for all users and enable the innovative service wireless consumers enjoy.

Without the ability to adapt, evolve, and respond to the changing wireless environment through reasonable network management, one consumer’s intensive network use can harm all other user in their vicinity:

- When one consumer’s use demands an inordinate amount of capacity, all of the other consumers on that cell are negatively affected.
- Absent broadband network management, **as few as 5% of users can monopolize cell capacity,** dictating the terms on which the remaining 95% of users get access to broadband.
- We are aware of one example where the use of BitTorrent, unknown to the consumer, almost brought an entire cell site down.

The Commission’s Proposed Rules Ignore the Realities of Wireless Network Management:

Because of the technological differences described above, wireless carriers actively manage their networks to both ensure the highest-quality Internet experience for all consumers – not only the few who demand inordinate amounts of bandwidth and capacity – and to ensure that services that are time-sensitive are given the resources to function properly.

Carriers Compete Vigorously on Wireless Network Quality and Capacity:

One need look no further than the advertising campaigns of wireless providers to see that coverage, capacity and quality of wireless broadband service is a major area of competition and differentiation for wireless providers. Carriers compete vigorously to win customers in this vibrant marketplace and do so by competing on nearly every aspect of service. Reducing wireless broadband network management to a lowest common denominator set of practices will reduce or eliminate this important competitive aspect of wireless broadband resulting in less innovation and choice for consumers.

Regulation of One Area of an Interdependent Ecosystem Will Have Consequences:

The Commission’s proposed rules suggest that regulation of broadband Internet access providers will ensure the open nature of the Internet. However, because, as CTIA and the Commission have stated, wireless broadband is part of a complex ecosystem, the Commission must be wary of the unintended consequences of altering the interaction between those ecosystem elements. The Commission’s NPRM cites a few, older examples of wired Internet access providers practices as evidence of a problem that needs to be remedied. The reality is that recent examples of actions that raise concerns have not been taken by network access providers, but by application providers and operating system developers.