

# **REASONABLE BROADBAND NETWORK MANAGEMENT**

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# Summary

- The reliability and quality of wireless communications – both broadband and basic voice – is threatened by the regulation proposed by Free Press and others.
  - Wireless networks share capacity between basic voice service and broadband data users. Therefore, congestion caused by intensive data applications can, when unmanaged, prevent other customers' basic voice calls.
- Calls for broadband carriers to simply “add more capacity” are misplaced with mobile wireless broadband.
  - Scarce spectrum resources force U.S. wireless carriers to be among the most efficient users of spectrum worldwide. Adding capacity to wireless networks is neither an easy nor economical task.
- The FCC should dismiss the pending Petition.
  - One-size-fits-all regulation of network management practices is an ill fit for the many differing broadband providers – particularly for the wireless broadband industry.
  - The Commission may address instances where it finds that broadband providers are unfairly managing their networks on a case-by-case basis.

# Wireless is Different

- Due to the shared nature of spectrum-based services, like wireless, network management is particularly important.
  - Commercial mobile wireless services are shared in two ways – between users and between services. Not only are voice users in a wireless network sharing the capacity of the cell with other voice users in their area, they also share with data users in their area.
  - As a result of this sharing, data users could adversely impact the quality of the voice network, not just the data network.
- Because services share a common delivery system (spectrum), wireless carriers must manage the spectrum resource to ensure that services needing faster connections are not degraded by other use of the network.
  - *E.g.*, voice service is very latency sensitive (the time between when one person speaks and the other person hears it). Data, on the other hand is fairly insensitive to latency. Delay on a voice call is much more noticeable than a few millisecond delay retrieving web search results.

# Network Management is Critical to Wireless Networks

- The purpose of network management is to ensure quality of service for consumers – *all* consumers, not just the fraction of users who demand high bandwidth use.
  - The Petition by Free Press is based on the complaints of some users whose applications may overtax network resources to the detriment of the vast majority of wireless customers.
- As few as four percent of users can use more than 50% of wireless network capacity because of applications that demand inordinate amounts of bandwidth.
  - Wireless network management techniques prevent these “bandwidth intensive applications” from overwhelming network resources, thus ensuring capacity for other voice and data users.
- In the absence of network management, intense use of the data network could prevent voice users’ calls from being completed.
  - *E.g.*, potential impact on E911 calls.

# Consequences of Network Management Regulation

- Even the most well-intentioned and crafted regulation in the network management space will be quickly surpassed by this incredibly fast-moving market segment.
  - Regulation of wireless is particularly susceptible to this problem as the technology and services that are available to consumers are advancing at an incredible pace.
- Prescriptive network management regulation could have unintended consequences for wireless broadband providers and consumers.
  - Carriers currently employ network management techniques for a variety of pro-consumer programs including:
    - Ensuring quality of voice and data service;
    - Protecting consumers from malicious software and spyware;
    - Protecting consumers from spam;
    - Providing customers with parental control software.

# Consequences of Network Management Regulation

- Regulation of wireless broadband network management will disproportionately impact small and rural wireless carriers whose spectrum constraints require greater management of resources.
- To the extent possible, the cost of expanding network capacity to accommodate the small percentage of users who demand “bandwidth intensive applications” will be borne by the majority of consumers who don’t have such disproportionate bandwidth demands.

# Disclosure of Service Limitations

- CTIA supports broadband provider's efforts to inform consumers about the limits, if any, of their broadband use.
- Disclosure will best serve to educate customers as to the “real world” limitations of their broadband service.
- Broadband providers should not, however, be forced to make detailed technical disclosures of network management methods.
  - Such disclosures do little to education consumers of the effects of the management, rather serving to educate those who would thwart network management efforts or cause the network harm.

# Conclusion

- The Commission should dismiss the pending Petition.
- The Petition seeks a blunt “one-size-fits-all” regulation to address a variety of *potential* concerns.
- The Commission is better equipped to address complaints about broadband network management concerns on a case-by-case basis, rather than through prescriptive rulemaking that risks shackling innovation.