

The FCC's open Internet Order

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Broadband Internet Access Service

- *A mass-market retail service ... that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints ...*

Reasonable Network Management

- *A network management practice is a practice that has a primarily technical network management justification, but does not include other business practices.*
- *A network management practice is reasonable if it is primarily used for and tailored to achieving a legitimate network management purpose*
- *taking into account the particular network architecture and technology of the broadband Internet access service*

No blocking rule

- *... shall not block lawful content, applications, services, or non-harmful devices ...*
 - prohibits network practices that block specific content, applications, or services
 - prohibits network practices that block non-harmful devices
 - allows blocking of unlawful content
 - e.g. child pornography, copyright-infringing materials

No throttling rule

- *... shall not impair or degrade lawful Internet traffic on the basis of Internet content, application, or service, or use of a non-harmful device ...*
 - addresses network practices that impair, degrade, slow down, or render effectively unusable
 - prohibits network practices that target particular content, services, applications, or devices
 - e.g. a disfavored VoIP service, services that compete with a broadband provider's affiliated content
 - does not address practices based on choices made by end users
 - e.g. service tiers, data caps

No paid prioritization rule

- *... shall not engage in paid prioritization.*
- *“Paid prioritization”*
 - *the management of a broadband provider’s network*
 - *to directly or indirectly favor some traffic over other traffic*
 - *traffic shaping, prioritization, resource reservation*
 - *in exchange for consideration from a third party*
 - *or to benefit an affiliated entity*

A General Conduct Standard

- *... shall not unreasonably interfere with or unreasonably disadvantage*
- *(i) end users' ability to select, access, and use broadband Internet access service or the lawful Internet content, applications, services, or devices of their choice*
- *or (ii) edge providers' ability to make lawful content, applications, services, or devices available to end users.*

A General Conduct Standard

- Carefully balance the benefits of innovation against harm to end users and edge providers
- Factors:
 - End-User Control
 - Application Agnostic
 - Standard Practices
 - Effect on Innovation, Investment, or Broadband Deployment
 - Competitive Effects
 - Consumer Protection
 - Free Expression

Transparency

- Commercial Terms
 - Prices: monthly prices, promotional rates, other fees, usage-based fees
 - Privacy policies

Transparency

- Performance Characteristics
 - Expected speed
 - Actual speed
 - Latency
 - Packet loss
 - Impact of non broadband Internet access services

Transparency

- Network Practices
 - Congestion management
 - Application-specific behavior
 - Device attachment rules
 - Security

End of Intro ...

... additional slides follow
if relevant to discussion

Outline of talk

- Broadband Internet Access Service
 - what is regulated and what is not
- Reasonable network management
- The rules:
 - No blocking rule
 - No throttling rule
 - No paid prioritization rule
- A general conduct standard:
 - No unreasonable interference or unreasonable disadvantage standard
- Transparency

Broadband Internet Access Service

- *A mass-market retail service ...*
 - sold to residential customers, small businesses, schools, libraries
 - does not include other services
 - e.g. enterprise services, VPN services, CDNs, hosting or data storage services
 - does not include services offered by premise operators
 - e.g. cafes, bookstores, universities

Broadband Internet Access Service

- *.... by wire or radio ...*
 - Fixed: serves end users primarily at fixed endpoints using stationary equipment
 - e.g. cable modems, DSL modems.
 - Mobile: serves end users primarily using mobile stations
 - e.g. smartphones, mobile-network-enabled tablets.

Broadband Internet Access Service

- *... that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints ...*
 - encompasses the exchange of Internet traffic by an edge provider or an intermediary with the broadband provider's network
 - does not include backbone services to the extent that they are separate from broadband Internet access service

Broadband Internet Access Service

- *...including any capabilities that are incidental to and enable the operation of the communications service ...*
 - assignment of an IP address to an end user
 - DNS offered by a broadband Internet access service provider to its end users

Broadband Internet Access Service

- Not included:
 - Content
 - User applications
 - Edge provider services (aka application providers)
 - Data services that are not broadband Internet access service, including
 - some facilities-based VoIP and IP-video offerings
 - connectivity bundled with e-readers, heart monitors, or energy consumption sensors, automobile telematics
 - Internet standards (e.g. IETF)
 - Assignments of names and numbers (e.g. ICANN, IANA)

Interconnection

- Broadband Internet access service encompasses the exchange of Internet traffic by an edge provider or an intermediary with the broadband provider's network
- Traffic exchange is not subject to the rules
- Parties may bring complaints to the Commission that practices are unjust and unreasonable

Reasonable Network Management

- *A network management practice is a practice that has a primarily technical network management justification, but does not include other business practices.*
 - excludes practices that permit different levels of network access for similarly situated users based solely on the particular plan to which the user has subscribed

Reasonable Network Management

- *A network management practice is reasonable if it is primarily used for and tailored to achieving a legitimate network management purpose ...*
 - examples:
 - network security and integrity
 - traffic that is unwanted by end users
 - alleviate congestion without regard to the source, destination, content, application, or service

Reasonable Network Management

- *A network management practice is reasonable if it is primarily used for and tailored to achieving a legitimate network management purpose ...*
 - guidance:
 - more likely to be found reasonable if it is transparent, and either allows the end user to control it or is application-agnostic
 - will consider whether the practice is triggered only during times of congestion and whether it is based on a user's demand during the period of congestion

Reasonable Network Management

- *... taking into account the particular network architecture and technology of the broadband Internet access service.*
 - e.g. cable, fiber, DSL, satellite, unlicensed Wi-Fi, fixed wireless, mobile wireless

No blocking rule

- *A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged ...*
 - only applies to providers of broadband Internet access service
 - and only to broadband Internet access service

No blocking rule

- *... shall not block lawful content, applications, services, or non-harmful devices ...*
 - prohibits network practices that block specific content, applications, or services
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 - allows blocking of unlawful content
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No blocking rule

- *... subject to reasonable network management.*
 - e.g.
 - network security and integrity
 - traffic that is unwanted by end users

No throttling rule

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No paid prioritization rule

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No paid prioritization rule

- No exception for reasonable network management
 - since paid prioritization is not a network management practice because it does not primarily have a technical network management purpose
- but there is a waiver process:
 - *The Commission may waive the ban on paid prioritization*
 - *only if the petitioner demonstrates that the practice would provide some significant public interest benefit*
 - *and would not harm the open nature of the Internet.*

A General Conduct Standard

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A General Conduct Standard

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A General Conduct Standard

- *... (i) end users' ability to select, access, and use broadband Internet access service or the lawful Internet content, applications, services, or devices of their choice ...*

A General Conduct Standard

- *... or (ii) edge providers' ability to make lawful content, applications, services, or devices available to end users.*

A General Conduct Standard

- *Reasonable network management shall not be considered a violation of this rule.*

A General Conduct Standard

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A General Conduct Standard

- Practices that could be assessed under the standard, based on the facts of each case, include:
 - Data caps
 - benefits to consumers and network management
 - vs. disadvantaging competing over-the-top providers
 - Sponsored data plans (aka zero-rating)
 - benefits to consumers and investment
 - vs. distortion of competition, user control, innovation

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