

Net Neutrality Guidelines

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- **Body of European Regulators for Electronic Communications**
- Established by Regulation (EC) No 1211/2009 of the European Parliament and of the Council of 25 November 2009, as part of the Telecom Reform package
- Successor to European Regulators Group (ERG), established in 2002 as advisory group to the EC

Main role

- Assists the EC and the national regulatory authorities (NRAs) in implementing the EU regulatory framework for electronic communications
- Provides advice on request and on its own initiative to European institutions

Guidelines background and next steps

- Implementation of European Net Neutrality Rules by National Regulatory Authorities (NRAs)
- Guidelines not about creating new rules; rather, about providing guidance on the regulatory implementation of existing rules
- Draft Guidelines are currently under public consultation (until 18. July)
- Final publication of the BEREC Guidelines by end of August
- In the future BEREC will review and update the Guidelines as and when it considers it to be appropriate
- BEREC workprogram foresees the development of measurement methodologies for monitoring of QoS and NN regulations (NN assessment toolkit)

Transparency requirements

Guidelines set out best practices which NRAs should follow

- Information, for consumers and otherwise, should be easily accessible, accurate, meaningful, comparable
- Information should cover:
 - Any traffic management measures used, and any impact on the end-user
 - Complaint-handling procedures
 - Data caps
 - Speeds (different metrics depending on fixed and mobile)
- Guidelines provide high-level definitions of speeds (minimum, maximum, normally available, advertised speeds)

Traffic management (TM)

- ‘Traffic management’ = the way traffic is forwarded in networks
- As long as traffic management is done independently of applications and end-users, the traffic is normally considered to be treated equally
- As a second step, the Regulation allows “*reasonable traffic management*” which may be used to differentiate between “categories of traffic”
- As a third step, the Regulation describes three specific exceptions which are allowed under stricter conditions

Reasonable and exceptional TM

- Reasonable traffic management
 - Categories of traffic could e.g. be defined by reference to application layer protocol or generic application type, but only in so far as:
 - i. this is linked to objectively different technical QoS requirements
 - ii. applications with equivalent requirements are handled in the same category
 - iii. the justification given is relevant to the category of traffic in question
 - NRAs should ensure such measures do not monitor specific content

- Exceptional traffic management
 - a) Compliance with other laws
 - b) Preservation of network integrity and security
 - c) Congestion management measures

Specialised services

Examples that may be considered specialised services:

- VoLTE (high-quality voice calling on mobile networks)
- Linear (live) broadcasting IPTV services with specific quality requirements
- Real-time remote health services

Specialised services must meet requirements of:

- Necessity – are they necessary to meet requirements for a specific level of quality?
- Capacity – is network capacity sufficient that quality of internet access services is not degraded?

Role of the regulators

- Supervision
 - Monitoring contract information, commercial practices, traffic management practices and specialised services
 - By means of assessment of practices in the market, technical measurements, information-gathering
- Enforcement, e.g.
 - Requiring ISPs to deal with degradation of Internet access services
 - Requiring ISPs to cease or revise problematic traffic management practices
 - Requiring ISPs to cease providing specialised services in absence of sufficient capacity for Internet access services
 - Imposing fines on ISPs

Technical Challenges for Regulators

- **Specify common set of measurement methodologies**
 - Allowing comparable results
 - Assessment of contracted quality (Internet access as a whole)
 - Measurement parameters and measurement reference points
 - Applicable to any access technology

Technical Challenges for Regulators

- **Assessing traffic management methods and possible NN conflicts**
 - Detecting deliberate throttling of applications versus temporal congestion
 - Different treatment of categories of traffic within Internet access services, strategies implemented in ISPs' networks
 - Effects on end-to-end quality of applications
 - Influence of different protocols
 - Source of “throttling” - client, server, network

Technical Challenges for Regulators

- **Specialised services versus Internet access**
 - Assessing whether network capacity is sufficient to provide specialised services in addition to any internet access services provided
 - Detection of possible degradation of Internet access quality
 - Long-term supervision of Internet access versus specialised services

Thank you!

*Tomorrow's IPPM WG meeting:
BEREC NN QoS overview*