

Update on Network Neutrality

Telecommunications Regulatory Affairs Advisory Committee
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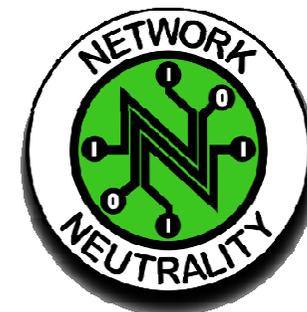
Content

- Update on latest development of network neutrality in overseas jurisdictions including :
 - the United States (“US”)
 - the European Union (“EU”)
 - the United Kingdom (“UK”)
 - Singapore
- Recap of regulatory regimes in Hong Kong
- Findings of tests conducted by OFCA for monitoring access to Over-the-Top (“OTT”) content services in Hong Kong



Overview

- Concept of “network neutrality”:
 - Same treatment should be applied to the delivery of all electronic communication irrespective of their origin, content and destination
- Different jurisdictions have adopted different regulatory stances and regimes which are still evolving



Overseas Situations – The US (1)

Open Internet Order 2015

- Came into effect on 12 June 2015
- Re-classification of broadband Internet access service to a “telecommunications service” under Title II of the Communications Act
 - Internet Service Providers (“ISPs”) classified as common carriers
- Clear, bright-line rules:
 - No blocking
 - No paid prioritisation
 - No throttling



Overseas Situations – The US (2)

Federal Communications Commission (“FCC”)’s Latest Decision

- On 14 December 2017, FCC voted to revoke the Network Neutrality Rules and promulgated the Restoring Internet Freedom Order:
 - Restored the classification of broadband Internet access service as an “**information service**”, which is no longer regulated by FCC
 - Allows blocking and paid prioritisation
 - Required ISPs to disclose how traffic is treated, including any blocking, throttling and paid prioritisation
 - Federal Trade Commission to handle any unfair trade practice and competition issues



Overseas Situations – The US (3)

Debates on FCC's Change of Rules

- Against
 - Carriers / ISPs may charge premiums for priority access to content providers
 - Consumers may experience differential treatments for access to different Internet applications and services
- For
 - OTT content providers are free-riding on ISPs investments
 - Return to hands-off regulatory framework
 - ISPs may use any additional revenues generated from high-bandwidth users to support the investment on network infrastructure for use by all users and bridging digital divide

Overseas Situations - The EU (1)

Adoption of EU Regulation

- The first EU-wide network neutrality regulation (“Regulation”) was adopted on 25 November 2015
- EU-wide network neutrality rules came into force on 30 April 2016
- Guidelines for the implementation of the obligations of National Regulatory Authorities (“NRAs”) (“Guidelines”) issued on 30 August 2016, which allow some exceptions to accommodate differential treatment from ISPs for:
 - specialised services e.g. VoLTE, IPTV services, remote surgeries, only if the ISP has sufficient network capacity
 - zero-rating, subject to assessment
 - traffic management measures, on a reasonable basis
- ISPs are required to comply with the equal treatment principle under the Guidelines

Overseas Situations - The EU (2)

BEREC Report

- In December 2017, BEREC issued a report giving an overview of the first year implementation of the Regulation and Guidelines by the National Regulatory Authorities (“NRA”) -
 - NRAs applied consistent treatment of practices relating to network neutrality’s core principles, such as prohibiting blocking and traffic discrimination
 - NRAs were actively monitoring the commercial practices in the market in related to the provision of Internet access service
- Criticism in the EU
 - Regulation is unable to achieve a level playing field because ISPs offer discriminatory access to applications, i.e. zero-rating
 - For example, some ISPs offer two-tiered pricing service packages, considered by some as a bigger departure from network neutrality than zero-rating

Overseas Situations - The UK (1)

Open Internet Code of Practice (“Open Internet Code”)

- Industry-led approach
- Voluntary industry code of practice published in July 2012, signatories of all major ISPs
- Revised Open Internet Code published in June 2016 to preserve the concept of an open Internet:
 - Access to all lawful content by the users without discrimination based on commercial rivalry
 - Transparent and clear traffic management policies

Overseas Situations - The UK (2)

Ofcom Report

- Ofcom published a report on “Monitoring Compliance with the EU Net Neutrality Regulation” (“Ofcom Report”) on 23 June 2017 covering five areas -
 - monitoring the quality of IAS
 - safeguarding open Internet access
 - traffic management
 - transparency measures
 - complaints and remedies
- No major concerns found regarding the openness of the Internet in the UK
- Some views in the UK
 - ISPs sells data packages that would favour certain web sites over their competitors
 - With greater choice and competition in the UK among ISPs, network neutrality would be less of an issue



Overseas Situations - Singapore

- Consultation on “The Internet Protocol Transit and Peering Landscape in Singapore” (“Consultation”) conducted by the former Infocomm Development Authority of Singapore (“IDA”)
- Having considered the views received in the Consultation, IDA issued its decision on 24 August 2016 -
 - No evidence that the IP transit and peering landscape had neither been functioning well nor ineffective competition
 - No strong reasons for IDA to directly intervene in IP transit and peering arrangements amongst ISPs
 - Encourages operators to publish their IP peering policies on their websites
 - Expects all licensees to negotiate in good faith and in a commercially reasonable manner for entering IP peering arrangement

Regulatory Regimes in Hong Kong (1)

- No genuine concern on network neutrality have been raised by members of the industry and the public so far
- In general, the keen facilities-based competition in the telecommunications market should have exerted sufficient safeguard against any particular ISP acting unilaterally to violate the principle of network neutrality and undermine the interests of Internet users
- Safeguards under the existing laws or legal instruments:
 - Telecommunications Ordinance
 - **ss.36A & 36B**: determine terms of interconnection & issue direction
 - **s.7I**: information
 - **s.24(1)(c)**: telecom officer wilfully detains or delays any message
 - Licence Conditions
 - **GC 5, GC 9 & SC 3**: requirement for provision of service as well as control of interference & obstruction
 - **GC 8 & SC 6**: obtain information from licensees
 - **SC 1.2**: issue guidelines in respect of, among others, the provision of satisfactory service

Regulatory Regimes in Hong Kong (2)

- Safeguards under the existing laws or legal instruments *[Cont'd]*:
 - Competition Ordinance
 - **s.6**: First Conduct Rule prohibits agreements, concerted practices or decisions having the object or effect of preventing, restricting or distorting competition in Hong Kong
 - **s.21**: Second Conduct Rule prohibits the abuse of a substantial degree of market power by an undertaking in a market which has the object or effect of preventing, restricting or distorting competition in Hong Kong
 - Fair trading provisions of the Trade Descriptions Ordinance
 - **ss.7A and 13E**: prohibit unfair trade practices such as false trade description of services and misleading omissions

OFCA's Performance Test of Access to OTT Content Services (1)

Background and Objectives

- Background
 - Emergence and growing popularity of OTT content services in Hong Kong
 - Concerns on whether ISPs in Hong Kong may have adopted discriminatory traffic management practices
- Objectives
 - To monitor the performance of access to OTT content services delivered by major ISPs
 - To detect any improper or problematic degradation or discriminatory prioritisation of the OTT content services being delivered by the concerned ISPs

OFCA's Performance Test of Access to OTT Content Services (2)

Details of the Test

- Testing period: May 2016 to January 2017
- Number of measurements conducted: Over 150
- OTT content service providers: LeTV, myTV Super and Netflix
- ISPs: Four major ISPs providing residential broadband services
- Testing time zone: Peak hours in weekdays and weekends
- Conduct tests by using ordinary broadband connections provided by ISPs at different geographical locations covering residential buildings in Hong Kong Island, Kowloon and the New Territories



MYTV
SUPER

NETFLIX

Letv

OFCA's Performance Test of Access to OTT Content Services (3)

Observations

- Satisfactory reception for all three OTT content services
- Downstream speed/Response time:
 - Varied with different broadband connections at different geographical locations, but overall downstream speed and response time of different OTT content services remained largely consistent
 - No observed systemic degradation of the OTT content services applied by ISPs
- Key performance indicators of OTT content services:
 - Sound and picture quality: satisfactory
 - Video/audio synchronization: over 99% without problem
 - Buffering issue: occurred occasionally across all major ISPs

Conclusion

- No evidence to suggest any improper or problematic degradation or discriminatory prioritisation of some of the most popular OTT content services being applied by the four major ISPs

Way Forward

- Network neutrality regulations in overseas jurisdictions are still evolving
- New issues or challenges may come up in the future along with further development of the Internet market
- OFCA will continue to monitor the relevant developments in other jurisdictions and may conduct timely reviews of the latest situations in Hong Kong
- ISPs are encouraged to enhance information transparency in disclosing information about their implementation of traffic management practices, if any

Thank You

