



URCA's Preliminary Position on Net Neutrality and OTT Services in The Bahamas

Consultation Document

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1 Introduction

The Communications Act, 2009 (Comms Act) prescribes the law applicable to the Electronic Communications Sector (ECS), empowers the Utilities Regulation & Competition Authority (URCA) as the independent regulator of the sector and charges URCA with the responsibility for implementing the Electronic Communications Sector Policy (ECSP) and enforcing the provisions of the Comms Act.

The convergence of the Internet and telecommunications has resulted in a tremendous technological evolution in the electronic communication sector. However, it has simultaneously stimulated vigorous debate regarding Net Neutrality amongst Telecommunication Regulation Authorities (TRAs), Internet Service Providers (ISPs) and Internet Content Providers (ICPs) in the telecommunications industry, globally. The debate has been so vigorous that in November 2017, The International Telecommunication Union (ITU), a specialized agency of the United Nations, formed a group of experts to look at the contentious issue of Net Neutrality and the ITU has encouraged its Member States to develop national policies to address this issue.

Net Neutrality is the principle that all electronic communications passing through a network should be treated equally regardless of content, application, service, user device, sender address or receiver address.¹ Another closely related, and equally contentious, issue is Over-the-top (OTT) services. OTT services include all short-message, video, audio, and other media services that delivered over the Internet without the network provider being involved in the development, control or distribution of the content.² Some examples of OTT services include, amongst many others, Skype, WhatsApp, Netflix, Facebook, Lime, and Viber. URCA believes that the proper treatment of Net Neutrality and OTT Services can advance the ECSP objectives

¹ Body of European Regulators for Electronic Communications (BEREC). (30 September 2010) BEREC Response to the European Commission's consultation on the open Internet and Net Neutrality in Europe.

² Body of European Regulators for Electronic Communications (BEREC). (January 2016) Report on OTT services.

by promoting the availability of a wide range of high-quality content services and improving the efficiency of the Bahamian electronic communications sector.

The purpose of this consultation document is to consult with stakeholders on URCA's proposed regulatory framework for Net Neutrality and OTT services in The Bahamas. URCA aims to propose regulatory measures that are efficient, proportionate, transparent, fair and nondiscriminatory and which are aligned with the principles set out in section 5 of the Comms Act.

1.1 Background

As demand for OTT services has grown exponentially over the past ten years, take-up of OTT services is impacting the economic models of traditional telecommunications businesses globally. The market for electronic communications services in The Bahamas has seen a similar growth in the availability of OTT services as the rest of the world. This has transformed the electronic communications market and has resulted in increased accessibility to content services. As a consequence of this development in the electronic communications market, providers and regulators around the world have adopted diverse regulatory responses with the aim of advancing their respective objectives.

As a result of the trends mentioned above and the potential impact on the ECS in The Bahamas, URCA considers it necessary and appropriate to consider whether it is necessary or appropriate for URCA's ECS regulatory framework to address Net Neutrality and OTT services in The Bahamas.

1.2 Objectives of this Consultation

In this document, URCA's objectives are to:

- i. set out and provide its analysis on the regulatory treatment of Net Neutrality and OTT services in other jurisdictions;

- ii. outline its preliminary thinking on Net Neutrality and OTT services in The Bahamas;
- iii. state the regulatory measures URCA proposes to adopt in relation to Net Neutrality and OTT services; and
- iv. solicit written comments and suggestions from the wider public and stakeholders on URCA's preliminary position.

1.3 Responding to this Consultation

URCA invites written participation from members of the public, key industry stakeholders, licensees, and other concerned persons in expressing their views on the matters discussed in this Consultation Document.

Persons may deliver their written comments or submissions addressed to the Director of Electronic Communications, URCA either:

- by hand, to URCA's office at Frederick House, Frederick Street, Nassau, Bahamas; or
- by mail, to P. O. Box N-4860, Nassau, Bahamas; or
- by fax, to (242)-393-0237; or
- by email, to info@urcabahamas.bs.

All comments and submissions to this Consultation Document should be submitted on or before 14 May 2018.

1.4 Structure of this Document

The structure of the remainder of this Consultation Document is as follows:

- Section 2 sets out the regulatory framework for this consultation;
- Section 3 provides context for the consultation;

- Section 4 discusses the reasons for policy on OTT and Net Neutrality in The Bahamas;
- Section 5 presents URCA's proposed policy on Net Neutrality and OTT services;
- Section 6 includes an assessment of section 5 requirements; and
- The Annex provides further information on URCA's benchmarking analysis of the regulatory treatment of Net Neutrality and OTT services.

2 Regulatory Framework for this Consultation

In this Section, URCA identifies the relevant regulatory framework that is applicable, in URCA's view, to Net Neutrality and OTT services.

- i. The Comms Act prescribes the laws that apply to the ECS. The Comms Act empowers URCA as the independent regulator of the sector and charges URCA with responsibility for implementing the ECSP.
- ii. Section 4 of the Comms Act mandates URCA:
 - a. to further the interests of consumers by promoting competition and in particular –
 - i. to enhance the efficiency of the Bahamian electronic communications sector and the productivity of the Bahamian economy;
 - ii. to promote investment and innovation in electronic communications networks and services;
 - iii. to encourage, promote and enforce sustainable competition; and
 - b. to further the interests of persons in the Bahamas in relation to the electronic communications sector by –
 - i. Promoting availability of a wide range of content services which are of high quality.
- iii. Section 5 of the Comms Act directs URCA to ensure that all policy measures, decisions and laws to take effect in the ECS in The Bahamas should be made with a

view to implementing the electronic communications policy objectives but must also comply with the following guidelines:

- a. market forces shall be relied upon as much as possible as the means of achieving the electronic communications policy objectives;
 - b. regulatory and other measures shall be introduced –
 - i. wherein the view of URCA, market forces are unlikely to achieve the electronic communications policy objective within a reasonable time frame; and
 - ii. having due regard to the costs and implications of those regulatory and other measures on affected parties; and
 - c. regulatory and other measures shall be efficient and proportionate to their purpose and introduced in a manner that is transparent, fair and non-discriminatory.³
- iv. Section 8 of the Comms Act confers upon URCA certain functions and powers. Indeed, URCA, in the performance of its functions, shall have the power to issue regulatory and other measures, including the power to, amongst other things, make determinations, issue regulations, issue direction and decisions, impose conditions and penalties by order and issue technical rules and standards.
- v. While in pursuance of the ECSP objectives, URCA considers it to be of vital importance to allow persons with sufficient interest a reasonable opportunity to comment on any proposed regulatory measures which, in URCA's opinion is of public significance. Therefore, in accordance with section 11 of the Comms Act, URCA now consults with the relevant stakeholders on its proposals regarding Net Neutrality and OTT services.

³ See Section 5 of the Communications Act, 2009.

3 Context for this Consultation

In this section, URCA provides the context for its consultation on Net Neutrality and OTT services.

3.1 Over-the-top Services

URCA believes that it cannot proffer an appropriate response to the issue of Net Neutrality without also considering a regulatory response to OTT services. As mentioned in section 1 of this document, OTT services is defined as a video, audio, and other media service delivered over the Internet without the Internet service provider or mobile service provider involved in the control or distribution of the content. Examples of OTT services include, amongst many others, Skype, WhatsApp, Netflix, Facebook, Lime, and Viber.

URCA notes that the ECS in The Bahamas has seen rapid consumer adoption of OTT voice, messaging and video applications over the past five years. In an article in The Nassau Guardian, The Bahamas Telecommunications Company (BTC), the incumbent cellular mobile service provider in The Bahamas, claimed that it had been impacted by the popular OTT service, WhatsApp, and further claimed that the company incurred a loss of \$10 million in revenue in 2015 due to the services being offered by the unregulated WhatsApp messaging service.⁴

Whilst URCA is of the view that global trends clearly indicate that there are declining revenues among service providers whose core business revolves around voice and sms services, it acknowledges that a shift in financial strategy to a data centric approach may offset the declining revenues. The ITU supports this view stating, “a win-win collaboration model will emerge only if network operators’ main revenue stream shifts towards data service provision.”⁵

⁴ The Nassau Guardian: WhatsApp ate \$10M of BTC’s revenue in 2015 (11 November 2015)

<https://thenassauguardian.com/2015/11/11/whatsapp-ate-10m-of-btcs-revenue-in-2015/>

⁵ ITU Blog: What’s the Economic Impact of Over-the Top (OTT) Players (15 March 2017)

<https://itu4u.wordpress.com/2017/03/15/qa-whats-the-economic-impact-of-over-the-top-ott-players/>

URCA believes that service providers in The Bahamas have begun adopting strategies to take advantage of the growing demand for data.

URCA considers that a significant part of the response to the prevalence of OTTs should be the adoption by affected regulated entities of innovative strategies that embrace the natural but rapid changes in the technological environment while remaining profitable, as has historically occurred in response to other disruptive influences on the electronic communications market. In this regard, URCA is encouraged by the response of the new cellular mobile service provider in The Bahamas, Be Aliv Limited (Aliv). Aliv has indicated that it embraces the challenge presented by OTT services and, in fact, encourages its employees to utilise the popular app as a primary means of communication.⁶ In addition, Aliv has introduced WhatsApp customer care as one of its innovations in providing value-added services to subscribers. URCA believes that adaptive approaches are necessary to effectively advance the ECSP objectives especially as it relates to facilitating the availability of a wide range of content services.

3.2 Net Neutrality

As mentioned above, Net Neutrality is the principle that all electronic communication passing through a network is treated equally. In the context of this discussion ‘treated equally’ means that electronic communication passing through a network is treated independent of:

- i. content;
- ii. application;
- iii. service;
- iv. device;
- v. sender address; and
- vi. receiver address.

⁶ Top Aliv Exec: BTC Has Nothing Worth Copying | The Tribune Newspaper
<http://www.tribune242.com/news/2017/mar/27/top-aliv-exec-btc-has-nothing-worth-copying/?news>

Sender and receiver address implies that the treatment is independent of end-users and content/application/service providers.⁷ Secondly, network neutrality is a network design principle wherein a maximally useful public information network aspires to treat all content, sites and platforms equally, which allows the network to carry every form of information and support every kind of application without Quality of Service (QoS) discrimination.⁸ Thirdly, on a “best efforts” basis, “...Net Neutrality means ensuring that all end-users are able to access the Internet content, applications and services of their choice at the same level of service quality, speed and price, with no priority or degradation based on the type of content, applications or services.”⁹

Traffic Management

A critical issue surrounding Net Neutrality is traffic management. According to the ITU, traffic management is defined as a collection of techniques that may be used by an ISP to plan, allocate, and manage network resources in order to attain optimum performance for diverse classes of users and services that utilise its network.¹⁰ The Office of Communications (Ofcom), the ECS regulator in the United Kingdom (UK), defines Internet traffic management as the ability to “restrict or ration traffic on their networks, or give priority to some types of traffic over others during peak periods or more general.”¹¹ Internet Traffic Management Practices (ITMP) may include practices such as throttling, prioritisation and blocking. The implementation of such traffic management strategies conflicts with the mentioned definitions of Net Neutrality. Recall that the previous descriptions of Net Neutrality suggest that Internet service providers would be obliged to treat all data streams equally, independent of the relevant

⁷ Body of European Regulators for Electronic Communications (BEREC). (30 September 2010)
BEREC Response to the European Commission's consultation on the open Internet and Net Neutrality in Europe.

⁸ Net Neutrality in Canada and what it means for libraries (2010)
https://spectrum.library.concordia.ca/6849/1/article_partnership.pdf

⁹ DoT Committee Report – Net Neutrality - May 2015
<https://assets.documentcloud.org/documents/2167977/net-neutrality-committee-report.txt>

¹⁰ ITU: GSR 2012 Discussion Paper – Net Neutrality: A Regulatory Perspective. (2012)
http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR12/documents/GSR12_Webb_NetNeutrality_1.pdf

¹¹ Ofcom: What is Internet Traffic Management (04 September 2013)
<https://www.ofcom.org.uk/phones-telecoms-and-internet/advice-for-consumers/advice/internet-traffic-management>

application, service, device, sender, or receiver.¹² Those descriptions are consistent with the ITU's view that broadband service providers and governments should treat all data on the Internet equally, and not discriminate or charge differentially by user, content, site, platform, application, type of attached equipment, or mode of communication.¹³ However, it is accepted that traffic management is necessary to ensure the efficient operation of the Internet and prevent degradation of service. So, traffic management can serve the interests of end-users, but it can also be an enabler for anti-competitive practices.

As part of this consultation, URCA conducted a comparative analysis of the regulatory treatment of Net Neutrality and OTT services in jurisdictions overseas. The study shows that many countries with more mature telecom markets such as the US, UK, EU, and Canada have addressed the issues of Net Neutrality and OTT services by providing broad policies that cover many issues while maintaining the spirit of the Open Internet concept. In contrast, smaller maturing markets like those in Caribbean countries have taken a cautious approach in formulating specific policies relating to Net Neutrality and OTTs. Countries that have addressed this issue have put in place regulatory frameworks that aim to drive universality, accessibility, and affordability of electronic communications services while promoting the economic viability of service providers. Of the four (4) Caribbean countries included in the study, Barbados is the only one to have established a policy that provides some guidelines (VoIP policy) that relate to OTT voice services but does not explicitly address Net Neutrality. It is worth noting that Barbados VoIP policy predates the Net Neutrality debate. ECTEL, which represents five (5) members states in the eastern Caribbean have provided guidelines pertaining to Net Neutrality.¹⁴

¹² Van der Wee, M., Vandevelde, N., Verbrugge, S., & Pickavet, M. (2015). Evaluation of the impact of Net Neutrality on the profitability of telecom operators. A game-theoretic approach. <https://biblio.ugent.be/publication/6868667/file/6868679.pdf>

¹³ ITU Centres of Excellence for Europe. (2015). Next Generation Broadband Internet Access.

¹⁴ ECTEL Member States: Commonwealth of Dominica, Grenada, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines.

Based on the evolution of electronic communications services globally, URCA also believes it is appropriate to review the issues relating to Net Neutrality and determine the way forward for the ECS in The Bahamas, in this regard.

Table 1 below summarises the regulatory position taken in various countries in respect of Net Neutrality and OTT services.

Country	Position on OTT Services	Position on Net Neutrality
Eastern Caribbean Telecommunications Authority (ECTEL)	Has not published a position on OTT services.	<p>Supports the principle of Net Neutrality. Views blocking and throttling as a practice that interferes with regional objectives.</p> <p>Reiterates that traffic management techniques by ISPs must not interfere with users' privacy rights and must not be used to achieve anticompetitive practices.</p> <p>ECTEL promotes information transparency to treat with the traffic management technique known as Deep Packet Inspection (DPI).</p>
Trinidad	No formal position on OTT services. The regulator in its consultative document recommends no blocking of OTTs.	No formal position on Net Neutrality.

Country	Position on OTT Services	Position on Net Neutrality
Jamaica	No official position on OTT services. Authorities instructed Digicel and Flow to discontinue blocking of OTT mobile apps, Viber and Nimbuzz, after learning that the telecom operators had engaged in that traffic management practice that contravened the legal framework.	No formal position on Net Neutrality.
Barbados	Barbados has an established policy on VoIP services based on different classes of services. VoIP operators whose services that traverse the PSTN in any form must adhere to some kind of regulatory obligations as explained above.	No formal position on Net Neutrality. Created policy for treatment of VoIP services before Net Neutrality became a global concern.
Canada	No formal position on OTT services. ITMP policy would apply to OTT services since OTT is viewed by the Canadian regulator as “Internet access to programming, independent of a facility or network dedicated to its delivery.”	<p>The policy is allowing for ITMP. Operators are required to state the ITMP being used; the need and purpose for the utilisation of that ITMP, and the effect resulting from employing it when faced with questions relating to compliance.</p> <p>The Canadian Regulator, CRTC, has decided to take a complaints-based approach for instances of</p>

Country	Position on OTT Services	Position on Net Neutrality
		<p>infractions of this policy with the burden of proof being placed on the citizens and Internet users' association.</p>
United Kingdom	<p>No formal position on OTT services but has in the past advised telecom operator to desist from blocking Skype traffic to preserve the principle of Net Neutrality.</p>	<p>Seeks best-efforts' Internet access and the provision of managed services to co-exist.</p> <p>Would consider imposing a minimum quality of service on all communications providers if managed services were prioritised in a manner that leaves insufficient network capacity for 'best-efforts' access to the Open Internet.</p> <p>Relies on market forces to effectively address blocking and traffic management in a discriminating manner. Will keep the position under review.</p> <p>Requires technical information be available to consumers and transparency in traffic management.</p>

Country	Position on OTT Services	Position on Net Neutrality
Brazil	No formal position on OTT services. Brazil boasts over 100 million WhatsApp subscribers making it a country with one of the largest subscriber base.	<p>In April 2014 the for President of Brazil signed into law the Marco Civil da Internet Bill (Marco Civil) guaranteeing Internet privacy and ensuring the neutrality of the Internet.</p> <p>However, the bill allows for the following exception to Net Neutrality under conditions such as:</p> <ul style="list-style-type: none"> i. cases when technical requirements necessitate exception for correct delivery of services and applications; and ii. for the prioritisation of emergency services.
European Union	No formal position on OTT services. Analysing whether or not OTT services are to be treated as an electronic communication service in accordance with the appropriate framework.	The EC implemented the following measures via the amended Universal Services Directive to bring about an environment that would eventuate in the buttressing of Net Neutrality that would mandate National Regulatory Authorities (NRA) to meet the following objectives:

Country	Position on OTT Services	Position on Net Neutrality
		<ul style="list-style-type: none"> i. “be able to set minimum quality levels for network transmission services (Article 22(3), Universal Service Directive); ii. allow consumers to be able to switch between ISPs quickly and without unnecessary penalties (Article 30, Universal Service Directive); and iii. ensure transparency in relation to ISPs' utilisation of any traffic-shaping measures in their contracts with consumers (Article 21(3) (d), Universal Service Directive).” (GSR12 Discussion Paper)
The United States of America	Net Neutrality rules inform the position relating to OTT services.	<p>Previous Position on Net Neutrality:</p> <p>In March of 2015, the FCC under Title II framework adopted three (3) rules called the Clear, Bright-Line Rules with the purpose of driving the concept of the Open</p>

Country	Position on OTT Services	Position on Net Neutrality
		<p>Internet, while also promoting innovation and investment in network infrastructure. These rules build on rules previously adopted.</p> <p>The rules include the following:</p> <ul style="list-style-type: none"> i. Clear, Bright-Line Rules (i.e., No Blocking, No Throttling, No Paid Prioritization); ii. No Unreasonable Interference or Unreasonable Disadvantage to Consumers or Edge Providers; and; iii. Enhanced Transparency <p>New Position on Net Neutrality:</p> <p>In December of 2017, The FCC, the US regulator of electronic communications, adopted the <i>Restoring Internet Freedom</i> Order. Some of the major changes are highlighted below:</p> <ul style="list-style-type: none"> i. In the new Order, the FCC reclassified broadband Internet access service as an

Country	Position on OTT Services	Position on Net Neutrality
		<p>information service, removing rules associated with the previous version such as the Clear Bright-Line and Internet conduct rules.</p> <p>ii. Also, The FCC modified the transparency rules by removing many reporting obligations, and restored the Federal Trade Commission (FTC) as the authority to prohibit unfair and deceptive practices, and protect interests of consumers.</p>

Table 1: Summary of the current position by Country on Net Neutrality and OTT services¹⁵

The countries that have adopted the principle of Net Neutrality have actually aligned themselves with the ITU's recommendations. The ITU is an advocate for the principle of Net Neutrality. According to the ITU, this advocacy demonstrates its commitment "to connecting all

¹⁵ Refer to Annexe A for additional benchmarking information.

the world's people – wherever they live and whatever their means.”¹⁶ At the Global Symposium for Regulators 2010 (GSR10), the ITU bolstered its stance on Net Neutrality by developing the ‘Best Practice Guidelines for Enabling Open Access (Guidelines)’. The ITU believes the Guidelines will help to achieve “effective competition while ensuring accessible, affordable and reliable services for consumers.”¹⁷

4 Justification for Preliminary Position on OTT and Net Neutrality in The Bahamas

According to section 5 of the Comms Act, URCA may introduce regulatory measures where “... in the view of URCA market forces are unlikely to achieve the electronic communications policy objective within a reasonable time frame.” When considering the option to introduce a regulatory measure, the Comms Act requires that URCA must:

- i. have due regard to the costs and implications of those regulatory and other actions on affected parties; and
- ii. the regulatory measures must be efficient and proportionate to their purpose and introduced in a manner that is transparent, fair and non-discriminatory.

As previously stated, Internet Traffic Management Practices (ITMP) may include practices such as throttling and blocking which could conflict with the principle of Net Neutrality, which is inconsistent with ITU recommendations and retard the advancement of the ECSP objectives. Therefore, Net Neutrality and OTT services guidelines are critical at this time considering the potential impact it may have on all stakeholders, including ISPs and consumers, amongst others.

¹⁶ International Telecommunications Union (ITU)
<http://www.itu.int/en/about/Pages/default.aspx>

¹⁷ GSR 10: Best Practice Guidelines for Enabling Open Access, 2010.
https://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR10/consultation/guidelines/GSR10_guidelines_V3-en.pdf

Based on the comparative analysis outlined in Table 1 and set out in more detail in Annexe A, it is clear that regulatory authorities in a number of countries have considered it appropriate to address the potential impact of policies that support the open Internet and is commensurate with the ITU's position of 'enabling open access'. As per the ITU's 2010 Best Practice Guidelines for Enabling Open Access, it was recommended that regulators should only allow differentiation of data on the Internet only when it is objectively justifiable. Following the publication of the Guidelines, in order to advance the policy objective, many regulators launched public consultations in their respective jurisdictions to address the practice of data differentiation on the Internet.¹⁸ In keeping with the Guidelines, URCA will consider regulatory intervention only where it considers current market conditions warrant the issuance of ex-ante regulations to align The Bahamas' practices with International Best Practices that are consistent with the ECSP objectives. Furthermore, URCA notes other measures recommended at GSR 10 to regulators in regards to ISPs disclosure of information concerning their traffic management practices.

Question 1: Do you agree that URCA should consider regulatory intervention only where market conditions warrant the issuance of ex-ante regulations to align The Bahamas' practices with International Best Practices that are consistent with the ECSP objectives?

In the Bahamian context, URCA has identified the following technological issues:

- i. Traffic Management and Quality of Service
- ii. Transparency

4.1 Traffic Management and Quality of Service

¹⁸ GSR 10: Best Practice Guidelines for Enabling Open Access, 2010.
https://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR10/consultation/guidelines/GSR10_guidelines_V3-en.pdf

In December of 2016, URCA published the Quality of Service Regulations and Network Performance Metrics (ECS 42/2016), which set out the minimum quality of service standards for ISPs. However, the document stops short of introducing regulatory measures to address ITMP relating to blocking and throttling. URCA considers that, as it relates to the Internet, these additional QoS issues would most appropriately be treated in the context of the discussion on Net Neutrality.

URCA believes that traffic control is necessary to ensure the efficient operation of the Internet and prevent degradation of service. However, although traffic management can serve the interests of end-users, it can also be an enabler for anti-competitive practices if discriminatory ITMPs are used to create unfair competitive advantages. While traffic control can be employed to give preference to emergency communications and ensure acceptable QoS, URCA is concerned about certain approaches that affect the quality of service by consumers from targeted ICPs. For example, without an SLA between an ISP and ICP, the traffic from some ICPs is throttled or blocked entirely. Therefore, URCA sees merit in discouraging ISPs from engaging in unreasonable interference or policies that would disadvantage consumers, ICPs, and other ISPs. URCA believes that such recommendations will drive Net Neutrality and promote innovation and investment in network infrastructure.

4.2 Transparency

Section 4 of the Comms Act requires URCA to further the interests of consumers by encouraging, promoting and enforcing sustainable competition. It is URCA's opinion, that competition is achieved where persons are better informed about the available electronic communication services and the practices of service providers. URCA notes that in countries such as Canada, UK, EU, and the US, the imposition of transparency measures assists consumers in making informed decisions. The objectives generally require that:

- i. ISPs must disclose accurate information regarding the utilisation of network management practices in their contracts with all consumers; and
- ii. ISPs must disclose information regarding network performance.

URCA agrees that encouraging licensees to publish their network management practices may create an avenue where consumers can get a better understanding of the available electronic communication services. For example, one frequently asked question by Internet consumers is why does my connection speed vary?¹⁹ The research suggests that in countries such as the United States, Canada, EU, UK, the introduction of transparency rules and recommendations help customers answer such questions and thus enable them to make more informed decisions about their choice of service providers. Hence, URCA is minded to issue regulatory measures that promote transparency requiring service providers to publish their ITMPs in the event service providers do not make such information available.

While URCA agrees that traffic management is necessary to ensure the efficient operation of the Internet and prevent degradation in QoS, URCA also believes that regulatory measure should seek to guard against anti-competitive and discriminatory ITMPs while being fair and transparent. Therefore, having regard to the requirement of section 5 of the Comms Act, URCA is minded to impose regulatory measures that require service providers to publish their ITMPs. Such a measure, in URCA's view, would ensure the practices of service providers are transparent to consumers and thus enable consumers to make more informed decisions when choosing an ISP.

5 URCA Preliminary Position on Net Neutrality and OTT Services

URCA now sets out its preliminary position on Net Neutrality and OTT Services for The Bahamas.

¹⁹ Cable Bahamas: Why does my connection speed vary (August 2015)
<https://www.cablebahamas.com/faqs/why-does-my-speed-vary/>

5.1 OTT Services

URCA believes that, as it relates to the treatment of OTT services, the advancement of the ECS and ECSP objectives can be most effectively achieved by maintaining the status quo in relation to licensing requirements of OTT services. In the event service providers, without URCA's written consent, restrict access or utilize other ITMPs that may cause unreasonable interference or unreasonable disadvantage to a consumer's service, URCA, under the current regulatory framework would take appropriate and proportionate enforcement actions to encourage compliance with the proposed Net Neutrality rules in section 5.2 below. URCA has identified OTT services as complementary services and not electronic communication services under the Comms Act, and thus do not require licensing from URCA. URCA commits to reviewing this position in due course and in line with technological developments nationally and globally, to guard against unfair competition in the ECS.

5.2 Net Neutrality

Traffic Management and Quality of Service

Further to the above discussions, URCA, therefore, proposes the following rules be applicable to Internet service providers, and, fixed and mobile data service providers:

- i. No Blocking, No Throttling; and
- ii. No traffic management practices that may cause unreasonable interference or unreasonable disadvantage to consumers, ICPs, ISPs and other licensees.

These proposed rules will further the aforementioned objective by:

- i. creating an environment where consumers of network services are afforded access to an ISP's network without interference regardless of content, applications, services, or non-harmful devices; and

- ii. ensuring data (i.e. ISPs and other licensees, and ICPs,) are not subjected to unfair discriminatory treatment or disadvantaged in their ability to offer lawful content, applications, services, or devices to their customers.

Question 2a: Do you agree that URCA should introduce a regulatory measure that would prohibit blocking and throttling?

Question 2b: Do you agree that URCA should introduce a regulatory measure that would disallow unreasonable interference or unreasonable disadvantage to consumers, ICPs, ISPs and other licensees?

Transparency

For the purpose of transparency, URCA proposes the following rules:

- i. ISPs must publicly disclose accurate information regarding the utilisation of Internet traffic management practices in their terms and conditions; inclusive of the traffic management practice to be utilised, the purpose of the traffic management practice, and the effect it would have; and
- ii. ISPs must publicly disclose information relating to the broadband Internet speed a consumer can expect during specified peak and off-peak hours.

Question 3a: Do you agree that URCA should require ISPs to publicly disclose information regarding the utilisation of Internet traffic management practices in their terms and conditions; inclusive of the traffic management practice to be utilised, the purpose of the traffic management practice, and its resulting effect?

Question 3b: Do you agree that URCA should require ISPs to publicly disclose information relating to the broadband Internet speed a consumer can expect during specified peak and off-peak hours?

URCA proposes that the above traffic management and transparency rules will come into effect 180 calendar days from the date of publication of URCA's Final Determination under this consultation process.

Question 4: Do you agree that the rules should take effect 180 calendar days from the date of publication of URCA's Final Determination?

6 Assessment of Section 5 of the Comms Act Requirements

In this section, URCA assesses the regulatory options considered in respect of the matters that are the subject of this exercise.

6.1 Regulatory Options

URCA's primary aim is to further the overall ECS Policy objectives, which include furthering the interests of consumers and of persons in The Bahamas in relation to the ECS. Given this, URCA has considered the following regulatory options:

Option 1: The 'Do Nothing' Option (i.e., maintain the status quo)

One option URCA can take to advance the ECS Policy objectives is to do nothing. This option should only be taken where URCA considers that market forces will cause the natural advancement of the ECSP objectives or when cost implications are unfavourable. However, as previously noted, URCA finds that the 'Do Nothing' approach:

- i. may pose an enormous risk for customers;
- ii. is out of step with international trends and the approaches taken by established and competent regulatory bodies overseas; and
- iii. does not embrace the ITU recommendation to promote Net Neutrality practices (See section 5 above).

Option 2: The Propose Regulatory Measure Option

In contrast, URCA may propose regulatory measures to advance the ECS objectives. URCA considers that the actions proposed in section 5 above are in line with URCA's statutory mandate to promote the overall ECS Policy objectives. Further to its review, URCA is confident that its proposed positions as specified in section 5 are consistent with section 4 principles for regulations and other measures. This is because, in URCA's view, market forces alone will not achieve the ECS Policy objectives. This thinking is justified by the results of URCA's benchmarking exercise, which is summarised in Table 1 above and set out in more detail in Annexe A below.

In the benchmarking exercise, the recent changes in the US to the regulator's Net Neutrality framework is taken into account in URCA's proposed rules set out in section 5. URCA notes with the elimination of the Clear, Bright-Line rules and the Internet conduct rules by the FCC, the FCC in its Order is stating a preference for ex-post approach with handling traffic management issues. The FCC claimed, there are other legal regimes, particularly antitrust law and the FTC's authority under section 5 of the FTC Act to prohibit unfair and deceptive practices, provide protection for consumers. It adds, these long-established and well-understood antitrust and consumer protection laws are well-suited to addressing any openness concerns, because they apply to the whole of the Internet ecosystem, including edge providers, thereby avoiding tilting

the playing field against ISPs and causing economic distortions by regulating only one side of business transactions on the Internet.²⁰

Contrary to the approach taken to preserve the open Internet, URCA believes that the proposed measures are the necessary approach to furthering the ECSP objectives.

URCA also notes the changes in the FCC's transparency rules which offer many parallels to the transparency rule it is proposing. The FCC transparency rules removes many of the reporting obligations and is designed around informing consumers of its business practices that enable consumers to make informed decisions. The FCC noted, [...] the transparency rule we adopt today will require ISPs to clearly disclose such practices and this, coupled with existing consumer protection and antitrust laws, will significantly reduce the likelihood that ISPs will engage in actions that would harm consumers or competition. To the extent that our approach relying on transparency requirements, consumer protection laws, and antitrust laws does not address all concerns, we find that any remaining unaddressed harms are small relative to the costs of implementing more heavyhanded regulation.²¹

Further, URCA believes that the proposed positions are:

- applicable to all providers of data/Internet communications services, regardless of technology or the service provider's position in the broader market. This ensures compliance with the high level principle of non-discrimination under the Comms Act;
- transparent by virtue of this public consultation process and URCA's standard practice of publicising its final decision on any matter of public significance;

²⁰ FCC: DECLARATORY RULING, REPORT AND ORDER, para. 140, Released: 4 January 2018. Restoring Internet Freedom Order.

https://transition.fcc.gov/Daily_Releases/Daily_Business/2018/db0105/FCC-17-166A1.pdf

²¹ FCC: DECLARATORY RULING, REPORT AND ORDER, para. 140, Released: 4 January 2018. Restoring Internet Freedom Order.

https://transition.fcc.gov/Daily_Releases/Daily_Business/2018/db0105/FCC-17-166A1.pdf

- proportionate having regard to the ECS Policy objectives and URCA's reasoning at section 5 above; and
- the most efficient and effective way for achieving URCA's objectives. URCA reiterates that the measures contemplated are not out of step with the international mainstream, supported by the position taken by URCA's counterparts in Canada, the EU (including the UK), and consistent with the ITU's urging for data-centric policies across its membership.

6.2 Consideration of Cost and Implications

As to the cost and implications of the proposed measures, URCA has given full consideration to these concerns. In its review, URCA aimed to strike a reasonable balance between the competing interests of service providers and their customers. URCA appreciates that its objectives are best achieved when the network owners are incentivised to invest in the development of new products. Indeed, studies have confirmed that operators are more likely to reach significant returns by providing content services in addition to network access.²²

Notwithstanding that, URCA is aware of the growing availability of OTT services in The Bahamas. URCA is mindful that OTT services such as WhatsApp, Viber, Facebook Messenger, and Skype, amongst others, compete with voice, messaging and video services of the network operators. Consequently, often there is a disruption in the traditional business and financial models for operators. In this regard, URCA notes that the more progressive network owners have adopted data-centric financial models and other innovative business strategies which lessen the impact of these emerging technologies. Evidence suggests that operators in The Bahamas are responding positively to these developments. As previously stated, as a new entrant in the cellular mobile market, Be Aliv has introduced WhatsApp customer care as one of its innovations in providing value-added services to subscribers.²³ This strategy by the new

²² ITU Blog. Q&A: What's the economic impact of 'over the top' (OTT) players? (March 2017) <https://itu4u.wordpress.com/2017/03/15/qa-whats-the-economic-impact-of-over-the-top-ott-players/>

²³ Top Aliv Exec: BTC Has Nothing Worth Copying | The Tribune Newspaper (March 2017)

cellular mobile service provider is consistent with recommendations from organisations such as the National Broadcasting and Telecommunications Commission (NBTC), the ECS regulator in Thailand, which suggested that operators, “...must encourage new service innovation, including strategic partnerships and service bundling with non-traditional, non-Telco, over-the-top (OTT) players and services.”²⁴ URCA is not aware of any barriers, legal or otherwise, that would prevent other licensees from responding in a likewise manner.

It is URCA’s experience that the growing demands for OTT services in The Bahamas have not impacted investments in networks and technologies or dis-incentivise service innovation. This is evidenced by the recent entry of Aliv to the cellular mobile market and investments by others in network expansion and upgrades. URCA understands that the implementation of similar measures to those URCA has proposed encouraged investments in the EU, UK, Canada, etc. Therefore, instead of resisting technological innovation, URCA is minded to encourage operators to seek more innovative, data-centric pricing strategies that would take advantage of the increasing demand for data. Hence, URCA is aiming to, if necessary, introduce regulatory measures that strike the appropriate balance between promoting investments and innovation in electronic communications networks and services while simultaneously encouraging sustainable competition, and facilitating the availability of a wide range of content services. URCA considers that its proposals complement current initiatives by operators toward a data-centric business model.

Having regard to the foregoing, URCA considers that the incremental costs incurred by URCA’s licensees that are related to the proposed measures will be more than offset by the benefits to be derived from same.

<http://www.tribune242.com/news/2017/mar/27/top-aliv-exec-btc-has-nothing-worth-copying/?news>

²⁴ National Broadcasting and Telecommunications Commission (NBTC): VOICE AND INTERNET SERVICE CHARGES IN ASEAN MEMBERS: ANALYSIS AND RECOMMENDATIONS (Jan-Apr 2016)

Question 5: Do you agree with URCA’s assessment of the regulatory options considered? If not, why?

7. Conclusions and Next Steps

This section of the Consultation Document sets out the proposed positions identified by URCA to further its support of the principle of Net Neutrality and the non-discriminatory use of OTT services. The proposed rules ensure that the country’s key electronic communications policy objectives are furthered by applying international best practices and ensuring that the proposed regulatory measures are aligned with approaches taken in other jurisdictions, both regionally and internationally.

URCA will continue to monitor the sector and will propose regulatory measures where it considers that the proposed rules are inadequate to bring about true Net Neutrality. URCA encourages service providers to seek written consent before acting in a manner that may cause them to be found in breach of the proposed regulatory rules.

URCA invites interested parties to comment on the consultation questions presented in this document no later than 14 May 2018.

URCA will review all written responses to the Preliminary Position Paper and issue a Final Determination on the consultation.

Public Consultation Questions

- Question 1: Do you agree that URCA should consider regulatory intervention only where market conditions warrant the issuance of ex-ante regulations to align The Bahamas' practices with International Best Practices that are consistent with the ECSP objectives?
- Question 2a: Do you agree that URCA should introduce a regulatory measure that would prohibit blocking and throttling?
- Question 2b: Do you agree that URCA should introduce a regulatory measure that would disallow unreasonable interference or unreasonable disadvantage to consumers, ICPs, ISPs and other licensees?
- Question 3a: Do you agree that URCA should require ISPs to publicly disclose information regarding the utilisation of traffic management practices in their terms and conditions; inclusive of the traffic management practice to be utilised, the purpose of the traffic management practice, and its resulting effect?
- Question 3b: Do you agree that URCA should require ISPs to publicly disclose information relating to the broadband Internet speed a consumer can expect during specified peak and off-peak hours?
- Question 4: Do you agree that the rules should take effect 180 days from the date of publication of the Final Determination?
- Question 5: Do you agree with URCA's assessment of the regulatory options considered? If not, why?

Annexe A: Benchmarking Study

In this section, URCA presents additional information on the treatment of Net Neutrality and OTT services in jurisdictions such as North America, Central America, Europe, and the Caribbean.

The United States of America on Net Neutrality

The FCC under the 2015 Protecting and Promoting the Open Internet Order promoted the concept of Net Neutrality using an ex-ante approach. In March 2015, the FCC adopted the Clear Bright-Line Rules with the purpose of driving the idea of the Open Internet, while also promoting innovation and investment in network infrastructure. Those rules build upon earlier rules established in 2010 to discourage service providers from acting as gatekeepers between edge providers and consumers while promoting transparency. The three (3) rules include the following:

- i. Clear, Bright-Line Rules (i.e., No Blocking, No Throttling, No Paid Prioritization);
- ii. No Unreasonable Interference or Unreasonable Disadvantage to Consumers or Edge Providers; and
- iii. Enhanced Transparency

The Clear, Bright-Line Rules aim at creating an environment where consumers of network services are afforded access to an ISPs network without any interference which can adversely impact the quality of service experience. These rules are subject to reasonable network management and prevent a service provider from blocking lawful content, applications, services, or non-harmful devices. Moreover, according to the FCC, providers of broadband service shall not impair or degrade lawful Internet traffic based on Internet content,

application, service or non-harmful device, subject to reasonable network management. Paid prioritisation is another practice that is addressed in the Clear Bright-Line Rule.

The objective of the No Unreasonable Interference or Unreasonable Disadvantage to Consumers or Edge Providers Rule is to ensure end users have uninterrupted access to lawful Internet content, applications, services, or devices of their choice. This rule also protects edge providers, including ICPs from unreasonable interference or unreasonable disadvantage in their ability to offer lawful content, applications, services, or devices to their customers, in the presence of reasonable IMTP.

Finally, the Enhanced Transparency Rule obligates service providers to disclose information regarding their traffic management practices, performance, and commercial terms of its Internet access services sufficiently for them to make informed decisions.²⁵

In 2017, the Commission reversed the Title II regulations of 2015 in favour of what it deems a light-touch framework of broadband Internet access service, known as the *Restoring Internet Freedom Order*. In this framework, the FCC reclassified broadband Internet access service as an information service which is contrary to the previous classification, *telecommunications service*. Also, the FCC declared that the rollback of the regulations eliminates the stifling of innovation and deterrence to investment, while on the other hand, empowering Americans to choose broadband Internet services that best fits their needs. The new Net Neutrality framework essentially eliminates the Clear Bright-Line Rules and the No-unreasonable interference/disadvantage Rules citing the likelihood of service providers facing increased network management costs resulting in cost of the rules outweighing the benefits. Additionally, the FCC modified the transparency rules thereby eliminating many of the reporting obligations imposed upon service providers under Title II regulations whilst adopting what it deems to be more robust transparency requirements. Furthermore, the new framework restores authority to the Federal Trade Commission (FTC) to guard against anticompetitive, unfair, or deceptive acts or practices.

²⁵ FCC: REPORT AND ORDER ON REMAND, DECLARATORY RULING, AND ORDER, 12 March 2015
https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-24A1_Rcd.pdf

United States of America on OTT Services

In the US, OTT service offerings include a broad spectrum of services inclusive of messaging, video, voice, and email applications. Popular OTT apps include Netflix, Hulu, Flixster, WhatsApp, Viber, Line, Skype, Magic Jack, and Tango. The US position on OTT services remains unchanged with the FCC's new Net Neutrality Order. The FCC in its 2017 *Restoring Internet Freedom Order* removed Internet conduct rules and the Clear Bright-Line Rules but indicated that discriminatory actions by service providers that violate antitrust laws would be enforceable by the FTC or the relevant authorities for violation outside of the FTC's jurisdictions. The FCC believes that the antitrust framework strikes the optimal balance by protecting competition and consumers, alleviating service providers from undue financial burdens and protecting OTT services from disruptive practices.

Canada on Net Neutrality

Canadian Radio-television and Telecommunications Commission (CRTC), Canada's regulator in the ECS, has taken a unique approach to Net Neutrality. CRTC's approach allows operators the freedom to manage traffic flow on their network acceding that conditions may arise that may necessitate traffic management practice.

When responding to accusations made against them where questions may arise as to their compliance with the regulatory framework established by the CRTC for actions germane to Internet traffic management practices (ITMP), operators are required to state the ITMP being used, the need and purpose for the utilization of that ITMP, and the effect resulting from employing it. Also, when traffic management practices are considered discriminatory, CTRC invokes the following requirements:

- i. demonstrate that the ITMP is designed to address the need and achieve the purpose and effect in question, and nothing else;
- ii. establish that the ITMP results in discrimination or preference as little as reasonably possible;
- iii. demonstrate that any harm to a secondary ISP, end-user, or any other person is as little as reasonably possible; and
- iv. explain why, in the case of a technical ITMP, network investment or economic approaches alone would not reasonably address the need and effectively achieve the same purpose as the ITMP.

It is worth noting the CRTC has decided to take a complaints-based (ex-post) approach for instances of infractions of this policy. In administering its policy, the burden of proof is placed on consumers' and Internet Users' Association.

Canada on OTT Services

Currently, in Canada, there are no policies that address the treatment of popular OTT apps such as Line, WhatsApp, and Viber. However, there are OTT service providers such as Netflix, which began offering unlimited movie downloads in 2010, that makes up a significant percentage of the traffic on broadband networks. Canada's ISPs claim that Netflix negatively impacts their investments due to a significant amount of traffic generated by the OTT provider. The CRTC in a fact-finding exercise asked stakeholders in the broadcasting community to provide data that would buttress their assertions that OTT services were negatively affecting their businesses. It is worth noting that the CRTC defined OTT services as "Internet access to programming, independent of a facility or network dedicated to its delivery."

In its subsequent report, the CRTC determined "that the evidence presented does not demonstrate that either the presence of OTT program providers or the greater consumption of OTT content by consumers is having an adverse impact on the ability of the Canadian

broadcasting system to achieve the policy objectives of the Broadcasting Act, or that there are structural impediments to a competitive response by licensed undertakings to the activities of OTT providers.”²⁶ Other findings by the CRTC demonstrate that they acknowledge the growth of OTT content but lack the resources to gain an incisive understanding of consumption trends. Also, the results identify that consumers are moving away from traditional subscription services, but the extent and the reasons for this trend cannot easily be attributed to one or more specific factors.

Brazil on Net Neutrality

In April 2014, then Brazilian President Dilma Rousseff ratified the Marco Civil da Internet Bill (Marco Civil) guaranteeing Internet privacy and ensuring the neutrality of the Internet.²⁷ According to the Marco Civil, “those responsible for internet transmission, switching and routing must give equal treatment to data packets being transmitted, regardless of the content, origin and destination, service, terminal or application.” However, the bill allows for exceptions where the principle of Net Neutrality may not apply, such as:

- i. cases when technical requirements necessitates exception for correct delivery of services and applications; and
- ii. for the prioritisation of emergency services.

Under the Marco Civil the National Telecommunications Agency (ANATEL), the Telecommunications regulator in Brazil, is required to advise the government regarding the circumstances when exceptions will apply.

²⁶ CRTC says no regulation for "over-the-top" programming - at least for now
<http://www.canadiancommunicationslaw.com/broadcasting/crtc-says-no-regulation-for-over-the-top-programming---at-least-for-now/>

²⁷ Mercury News: Net Neutrality in Brazil: Anatel Kicks off Consultation. 1 April 2015
<http://www.bnamericas.com/news/technology/net-neutrality-in-brazil-anatel-kicks-off-consultation1>

Brazil on OTT Services

It is estimated that the legislation impacted 100 million Brazilians users of the OTT service, WhatsApp. The largest Latin American broadband market boasts an increasing number of avenues to access OTT video services. NetMovies, the local equivalent to NetFlix, offers mailed DVDs and subscription video on demand (SVOD). Other operators offering OTT video services in Brazil are Terra TV and Saraiva Digital. Brazilians are expected to benefit with availability to download games, music, and video on demand with the launch of video consoles such as Xbox 360 Live and Sony PlayStation 3. In Brazil, IPTV is currently restricted from distribution by telecommunications providers except for in the case of video on demand to the PC.

The United Kingdom on Net Neutrality

Ofcom has recognised the many benefits derived from the proliferation of Internet connectivity. Ofcom does acknowledge that with the unprecedented growth in demand, it presents a challenge to network operators to manage traffic to (or “intending to”) ensuring efficient use of their network in safeguarding against network congestion that may adversely affect safety-critical traffic, for example, calls to emergency services.

Ofcom has identified the following two forms of Internet traffic management that it considers when looking at the benefits gained from traffic management:

- i. Best-efforts' Internet access, under which network operators attempt to convey all traffic on more or less equal terms. This results in an 'Open Internet ' with no specific services being hindered or blocked, although some may need to be managed during times of congestion; and

- ii. Managed Services, under which network operators prioritise certain traffic according to the value they ascribe to it. An example may be the prioritisation of a high-quality IPTV service over other traffic. This amounts to a form of discrimination, but one that is usually efficiency enhancing.

Ofcom's aim is to create an environment where consumers can benefit from innovation in services as well as investments in networks. Due to changes in EU framework and similar UK law, regulators can enhance consumer protection by implementing quality of service standards to ensure 'best-efforts' Internet access and demanding transparency from network operators in utilising traffic management practices.

The following provides a summary of Ofcom's views on the UK market regarding traffic management practices and transparency required by network operators:

- i. Ofcom recognises the benefits associated with 'best-efforts' Internet access and the provision of managed services, and seek for them to co-exist;
- ii. Ofcom would be concerned if network operators were to prioritise managed services in a manner that leaves insufficient network capacity for 'best-efforts' access to the open Internet. In such circumstances, Ofcom would consider using the powers which allow it to safeguard 'best-efforts' access to the open Internet by imposing a minimum quality of service on all communications providers;
- iii. Ofcom regards any blocking of alternative services by providers of Internet access as highly undesirable. Where providers of Internet access apply traffic management in a discriminatory manner, Ofcom's view is that this could have a similar impact to outright blocking. Ofcom's current view is that it should be able to rely on the operation of market forces to address the issues of blocking and discrimination, but it will keep this position under review; and
- iv. Ofcom considers that effective competition requires that sufficient information is available to enable consumers to make good purchasing decisions. This document

sets out Ofcom's current view as to what it believes to be necessary, both regarding technical information on traffic management practices, and transparency as to services which are blocked or discriminated against."²⁸ (Ofcom's approach to Net Neutrality, 2011)

United Kingdom on OTT Services

Ofcom has assumed a more relax and hands-off approach regarding regulating OTT services due to an effective market competition where no competitor has a distinct advantage. However, during the launch of Skype in the UK, network operators became concerned that the OTT voice service would result in diminishing returns and therefore moved to block Skype. Ofcom is claiming that this action taken by the operators was in direct contravention with the principle of Net Neutrality intervened and advised the network operators to allow consumers to have access to Skype.

In figure 1 below, it is clear that the annual growth of Skype traffic has steadily increased from 2005-2013 creating affordability in international calling for a larger number of consumers. During the period 2007 to 2009, international phone traffic via the traditional phone networks experienced a declining annual growth plummeting from approximately 44 billion minutes to around 22 billion minutes while at the same period Skype traffic increased from roughly 7 billion minutes to 22 billion minutes. The international phone traffic annual growth has fluctuated over the eight (8) year period deducing that network operators have found ways in which to remain competitive while meeting regulatory obligations against an unregulated service whose traffic traverses over the Internet.

²⁸ Ofcom: Ofcom's Approach to Net Neutrality, 24 November 2011
<https://www.ofcom.org.uk/consultations-and-statements/category-1/net-neutrality/statement>

Increase in International Phone and Skype Traffic



Figure 1: Skype Traffic

EU on Net Neutrality

The Net Neutrality debate commenced in Europe in 2009 with the European Commission (EC) extending support to the principle of an open Internet by creating regulatory measures that will effectively safeguard the Internet by ensuring equity. The EC implemented the following actions via the amended Universal Services Directive to bring about an environment that would eventuate in the buttressing of Net Neutrality that would mandate National Regulatory Authorities (NRA) to meet the following objectives:

- i. be able to set minimum quality levels for network transmission services (Article 22(3), Universal Service Directive);
- ii. allow consumers to be able to switch between ISPs quickly and without unnecessary penalties (Article 30, Universal Service Directive); and
- iii. ensure transparency about ISPs' utilisation of any traffic-shaping measures in their contracts with consumers (Article 21(3)(d), Universal Service Directive)."²⁹

²⁹ ITU GSR12 Discussion Paper: Net Neutrality: A Regulatory Perspective, 2012
http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR12/documents/GSR12_Webb_NetNeutrality_1.pdf

EU on OTT Services

One of the key issues in the European Union revolves around the definition of electronic communications systems (ECS) and information services (IS). National Regulatory Authorities (NRAs) are faced with determining whether OTT services are electronic communication services as defined by the relevant legislative framework. BEREC has expressed its intentions to bring clarity to this issue by reformulating these definitions.

Differences in how ECS and OTT are treated are addressed in BEREC's report:

"From the end-user protection or public safety perspective, there is merit in analysing the suitability of envisaging that the general obligations foresaw in the ECN/S Framework (e.g. access to emergency numbers, legal interceptions, transparency obligations, interoperability obligations, switching and contract information and data protection) apply to all similar services. These obligations pursue important general interest objectives. So, it is important to examine whether or not these obligations are fulfilled by the current General Directives in which these obligations are addressed. If not, relevant to analyse the convenience of extending the duties of the ECN/S Framework to those OTT services equivalent to the ECS taking into account the proportionality criteria."³⁰ BEREC in its report presented the following taxonomy that it considers most useful in its discussion on OTT Services:

- i. OTT-0: an OTT service that qualifies as an ECS;
- ii. OTT-1: an OTT service that is not an ECS but potentially competes with an ECS; and
- iii. OTT-2: other OTT services.

BEREC illustrated the taxonomy in the figure that follows.

³⁰ ITU: Regulatory approaches in the new digital environment, 2015
<https://www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/Documents/Events/2015/Dec-OTT/Presentations/Panel%20Discussion%20Position%20Paper%20Regulation%20OTTs%20Final%20PS.pdf>

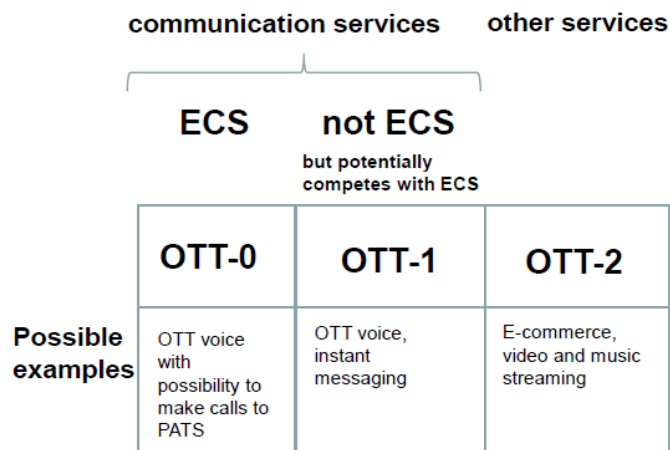


Figure 2: BEREC'S OTT Taxonomy

ECTEL on Net Neutrality

ECTEL, the telecommunications regulatory body for five (5) Eastern Caribbean member states on the 12 November 2016, published its Determination on InterNet Neutrality outlining its approach on the issue after completing public consultation.

ECTEL takes the following position relating to Net Neutrality:

- i. “[Is] committed to the principle of an open Internet as defined by Tim Wu, and maintains that the practice of blocking websites and throttling speeds interferes with regional objectives to utilise Information and Communication Technology (ICT) as a way of transforming economies and transitioning towards knowledge- based economies”;
- ii. “[Maintains] that Deep Packet Inspection (DPI) as a traffic management technique interferes with the privacy rights of the customer and can be utilised for anti-competitive purposes. ECTEL reiterates that traffic management techniques must not interfere with the fundamental right to privacy and must not be utilised to achieve anti-competitive purposes”;
- iii. “[Resolves] to treat the issue of DPI and traffic management at this time through the promotion of information transparency and a review of the Quality of Service

Regulations. For the avoidance of doubt, ECTEL will not at this time introduce Net Neutrality regulations, but will reserve its right to do so at a later time”; and

- iv. “[Resolves] to strengthen the capacity of the National Telecommunications Regulatory Commissions to deal with the anti-competitive conduct by continuing to work on the passage of the draft Electronic Communications Bill, and co-operate with the Eastern Caribbean Competition Commission when established.”³¹

ECTEL in its approach to Net Neutrality focused on Information Transparency, Reform of the Quality of Service Regulations, and Strengthen Anti-Competitive Rules.

Information Transparency

ECTEL believes that DPI interferes with the users’ privacy rights. On the other hand, it accepts the notion that it is a traffic management practice that ISP’s may employ to ensure the integrity of their network. ECTEL recommends that all ISPs publish information relating to traffic management practices, such as the Internet speed during peak and off-peak hours, the type of traffic management practice utilised, and the impact the user should expect to experience relating to service and confidentiality of information passing over the network. Also, it is recommended that the ISP seek the consent of the consumer to utilise traffic management strategies.

Reform of the Quality of Service Regulations

Whilst ECTEL encourages ISPs to adhere to the recommended transparency measures, it believes that it may be necessary to review its Quality of Service Regulations with a view to safeguarding the Internet by issuing minimum Internet broadband speeds.

Strengthen Anti-Competition Rules – The New Electronic Communications Bill

In addition to reviewing the Quality of Service Regulations, ECTEL acknowledges the need for legislative reform and seeks to have the Electronic Communications Bill promulgated. ECTEL

³¹ ECTEL Determination on InterNet Neutrality (12 November 2016)
<https://www.ectel.int/determination-on-internet-neutrality/>

believes the bill will allow for more efficient treatment of DPI and strengthen efforts to deal with anti-competitive conduct.

ECTEL on OTT Services

ECTEL has not stated any formal position on OTT services. However, its commitment to the principle of Net Neutrality suggests that discriminatory actions such as blocking and throttling, amongst others, to OTT apps is highly discouraged and may be seen to be inconsistent with regional objectives.

Trinidad on Net Neutrality

Trinidad and Tobago have yet to clearly state its position in regards to Net Neutrality. However, the medium-term policy of the Government of Trinidad and Tobago is centred on making ICT infrastructure universally available and affordable in the pursuit of building a knowledge-based information society.³² The Our Smart (National ICT Plan) has been created to (or “intending to”) foster a more pervasive broadband infrastructure that would achieve the Government’s ICT policy of a more connected society.

Trinidad on OTT Services

In a consultative document recently published by the Telecommunications Authority of Trinidad and Tobago (TATT) on OTT services to generate discussion and feedback, the Regulator discussed salient points such as the impact of OTT services on customers, service providers, Internet governance, and regulations. Different approaches to the treatment of OTT services were also outlined in the document. TATT asserted that it is possible that OTT is the vehicle that

³² Telecommunications Authority of Trinidad and Tobago (TATT) | SG3RG-LAC MEETING: NET NEUTRALITY, 22 April 2015.
http://www.itu.int/en/ITU-D/Regional-Presence/Americas/Documents/EVENTS/2015/0421-BS-Economic/6_2.pdf

drives telecommunications services to an underserved population where affordability may serve as a barrier to access for this segment of the population.

TATT while bringing to light all the intricacies involved in regulating different modes of OTT services such as App to App, App to PSTN, PSTN to App, OTT messaging, and OTT media services stopped short of taking a definitive position on this topic. From the research, TATT concluded that OTT messaging services did not have an adverse impact on service providers compared to the financial loss incurred by OTT voice services in utilising the operator's infrastructure.

The Regulator identified two key strategies for consideration to the regulatory framework: Aggressive, and Collaborative Strategy. The Aggressive Strategy supports the Government of Trinidad and Tobago's policy of engendering a "more connected" society. The consultative document states "The Authority, therefore, recommends that no blocking of OTT VoIP services be allowed by authorised public telecommunications service providers." The Regulator views any actions to block OTT services as being counterproductive to Trinidad and Tobago's national agenda.

In addition to the Aggressive Strategy, the Regulator considers the Collaborative Strategy to bolster their regulatory framework. This Strategy involves the Regulator adopting an approach that an authorised telecommunications provider enters into a commercial agreement with an OTT VoIP operator. Under Trinidad and Tobago's legal and regulatory framework, services may be regarded as a public telecommunications service if the facilities of a network provider are used, and as such will require a concession granted by the Minister under section 21 of The Telecommunications Act. TATT is of the view that OTT VoIP services may be regarded as a public telecommunications service under their legal and regulatory framework. It is worth noting that TATT has not formally adopted any Net Neutrality rules and stated in its consultative document that they are in the process of drafting a discussion paper focused on network neutrality for consultation.

Jamaica on Net Neutrality

Neither the Government of Jamaica nor Office of Utilities Regulation (OUR) has produced any guidelines or policies in regards to Net Neutrality. However, as in most countries, the subject of Net Neutrality has become a major cause of concern for all stakeholders involved as two of the regional players in telecommunications have taken it upon themselves to protect their interests against new developments that could impact their revenue stream. At present, the regulator is preparing to address the issue of Net Neutrality to strike a balance where all stakeholders concerns could be treated with an equitable solution.

Jamaica on OTT Services

In Jamaica, the two largest providers of telecommunication services are Digicel and FLOW, a brand of the Cable and Wireless Communications (CWC) group. At present, regulations of the communications sector in Jamaica are split among the following four entities; the Office of Utilities Regulation (OUR), Spectrum Authority, Fair Trading Commission, and the Broadcasting Commission. Discussions are on-going to establish a converged regulator that will provide oversight over the entire gamut of communication services. Jamaica, like many of their Caribbean neighbours, has not formally addressed the issue of Net Neutrality and OTT services in their regulatory framework.

Digicel and FLOW moved to effectively block OTT VoIP services such as Viber and Nimbuzz in 2014 adducing according to Digicel that “unlicensed VoIP operators like Viber and Nimbuzz use telecoms to deliver their services but do not pay the requisite money for the privilege.”³³ Opponents of the blockage argued that the restriction of OTT VoIP services over the telecom provider’s network would have the effect of stifling innovation and would be counterproductive to the principle of Net Neutrality. Months after the action taken by the two telecoms operators,

³³ The Gleaner | Digicel, Lime Follow Through On VoIP Blockade, 2 July 2014.
<http://jamaica-gleaner.com/gleaner/20140702/business/business3.html>

the Minister of Science, Technology, Energy, and Mining made known that the Government intends to bring regulations that would tax the providers of VoIP services.

Barbados' Position on Net Neutrality

Barbados like most Caribbean countries does not have a position on the broad concept of Net Neutrality and the open Internet. The issue related to Net Neutrality is based on how OTT VoIP services are treated in the legal framework that governs how telecommunications services are regulated in Barbados. The following section outlines the rights and obligations assigned to service providers, including VoIP providers.

Barbados on OTT Services

In Barbados, VoIP services that have interconnection with the local telecoms operators are regulated to prevent illegal bypass to the PSTN. In Barbados the “Barbados Voice over Internet Protocol” Policy divided VoIP services into four (4) classes of services:

- i. Class 1: Primary Line VoIP Services - This class of service includes telecommunications service consisting in the whole where the conveyance of signals is by means of the PSTN. This class of service is thought to be appropriate for use as the sole or primary means of access to the PSTN³⁴:
 - a. The rights and obligations given to Class 1 VoIP service providers with an option for Universal Service Fulfilment are the following:
 - b. Interconnection to Barbados PSTN
 - c. Quality of Service Standards
 - d. Last Mile Transport – Service Provider Supplies

³⁴ Barbados Voice Over Internet Protocol (VoIP) Policy, 15 August 2007.
<http://www.telecoms.gov.bb/website/Documents/Policies/PDF/voippolicy.pdf>

- e. Disclosure to Customers
- f. FAX and Modem Support
- g. Core Network Usable During Power-failures
- h. Barbados PSTN Numbering
- i. Public Emergency Call Services
- j. Directory Inquiry Services
- k. Number Portability
- l. Universal Service
- m. Indirect / Equal Access

Class 2: Secondary Line VoIP Services - This class of VoIP service is deemed not appropriate for primary phone connection as end-to-end communication is not provided over the PSTN. The rights and obligations applicable to Class 2 include the following:

- a. Interconnection to Barbados PSTN and Internet
- b. Last Mile Transport – Customer Provided
- c. Quality of Service Standards
- d. Disclosure to Customers
- e. Barbados PSTN Numbering
- f. Indirect / Equal Access

Class 3: Internet Telephony VoIP Services - This category includes anyone registered in Barbados providing VoIP telephony not using Barbados numbering and shares no interconnection with any service providers for telephony services. Calls in this class do not originate or terminate on Barbados PSTN but may utilise local Internet services for the transport of communications. This type of VoIP service is not appropriate for use as a customer's primary phone service. The sole right or obligation for this class of service is Disclosure to Customers.

Class 4: Peer-2-Peer (P2P) Voice Services -The Policy defines Class 4 services as Peer-to-Peer VoIP services which consist of two or more devices connected to the Internet independent of the PSTN. This form of service is unregulated and should not be used as a primary source of communication for customers.

In Barbados, any provider of VoIP telephony service whose traffic utilises the PSTN in whole or in part is subject to regulations and is obligated to comply with standards of international best practices such as numbering; quality of service, interconnection, and disclosure to customers. Class 1 includes a requirement for the core network of the service provider to be available in spite of power failures, and other essential functions such as the provision of fax and modem support, access to emergency calls, number portability, and universal services.

Summary of International Treatment of OTT and Net Neutrality

Although URCA published the Quality of Service Regulations for Electronics Communications Networks and Services in The Bahamas (ECS42/2016) which establishes minimum required service standards for Internet services, URCA has not specifically addressed the topics Internet governance, Net Neutrality, or OTT services because it intends to act in response to those concerns in a separate document. In its review of the international environment, URCA is aware of the recent changes to the US Net Neutrality framework and notes that even with the reversal of its previous framework, its regulator, the FCC, is of the view that the Open Internet will be preserved due to enforcement of antitrust laws by the relevant authorities, and a more robust transparency rule, amongst others. URCA learnt that policies that promote Net Neutrality could advance the ECSP objectives. URCA also learnt that market forces alone, even in developed markets, did not lead to the adoption of Net Neutrality practices by ISPs. Instead, the principle of Net Neutrality was introduced by the sector regulator, as recommended by the ITU.