



**Digicel Response to the Consultation
by the Regulatory Authority of Bermuda (“The Authority”)
on the Open Internet Framework General Determination
(the ‘Consultation’)**

Submitted by and on behalf of	The Bermuda Telephone Company Limited (“BTC”), Transact Limited (t.a Digicel) and Telecommunications (Bermuda & West Indies) Limited (t.a Digicel); <i>“DIGICEL”</i>
Date	28 June 2019
To	Mr Michael Wells Chief Technical Officer The Regulatory Authority of Bermuda
Matter	20190520

This response is submitted by and on behalf of Digicel in response to the Open Internet Consultation Document, issued by the Regulatory Authority of Bermuda (the “Authority”) dated 20 May 2019 (the “Consultation”).

We thank you for the Authority to facilitate the public debate on the concept of an open internet.¹

The comments as provided herein are not exhaustive and Digicel's decision not to respond to any particular issue(s) raised in the draft Regulations or any particular issue(s) raised by any party relating to the subject matter generally does not necessarily represent agreement, in whole or in part nor does any position taken by Digicel in this document represent a waiver or concession of any sort of Digicel’s rights in any way. Digicel expressly reserves all its rights in this matter generally.

Digicel does not agree with the Authority’s proposed position in respect of the issues being consulted on. Our general comments, which are in addition to our responses to the specific consultation questions set out in Annex 1, outline why we believe that the Authority’s analyses and proposals are flawed in the context of the Bermudian regulatory framework and in terms of the Bermudian electronic communications sector and the wider Bermudian economy.

Also enclosed is a copy of “Net Neutrality” booklet provided to the other policy makers and regulators in the region in response to this topic, especially the danger of the blanket ban and intervention approach.

Digicel is of course available, and would be happy, to discuss our submission further. Please do not hesitate to refer any questions or remarks that may arise as a result of these comments by Digicel to: -

Paul Stafford
Chief Executive Officer
Digicel Bermuda Limited
Email: Paul.Stafford@digicelgroup.com

¹ The Consultation and our submission use “open internet” and “net neutrality” interchangeably. See the definition by the Body of European Regulators for Electronic Communications (“BEREC”), at paragraph 5 of the Consultation.

Digicel's Response to Consultation Document on Open Internet

Since the height of public and media interest in the topic of net neutrality a decade ago, much has changed. The Federal Communications Commission (FCC) has revoked its Open Internet Order² and most strikingly, there is now a widespread acceptance that all data is not equal.

Consider the categories of misinformation, disinformation, inappropriate content, hate speech, live streaming of the aftermath of crime scenes and natural disasters and information on self-harm, most of these are legal but have become unacceptable to distribute freely. The UK is introducing an age-verification system for online pornography in approximately 6 months' time. Countries such as Germany have laws which require the prompt takedown of hate speech. The recently passed European Copyright Directive will distinguish between the use of "snippets" in search results compared to longer results which may trigger copyright.

The ad funded commercial model which in part drove the demands to ensure unfettered access to "free" services has come under scrutiny with data breaches and claims of inappropriate use of personal data calling into question whether such "free" services should be subject to strong regulations.

We would like to bring to the Authority's attention that in the region, service operators, including Digicel, have signed up to the CANTO Code of Practice on Safeguarding the Open Internet³, committing not to block or throttle legal content. This is based on principles developed by Cisco, a copy of which is attached to this submission as Annex 2.

The absolutism that characterised earlier net neutrality debates in the USA and Europe where access to all on-line information was to be treated equally has waned. The recognition that all data is not equal facilitates a more nuanced and sophisticated consideration of the issues. This will be of particular importance as 5G networks operate on the basis of segmenting and prioritising data flows.

It is against this backdrop that the questions posed by the Authority in this Consultation must be considered.

² <https://www.fcc.gov/restoring-internet-freedom>.

http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db1122/DOC-347927A1.pdf

³ <https://www.canto.org/wp-content/uploads/2014/12/20160523-Code-of-Practice-on-Safeguarding-the-Open-Internet-002-1.pdf>

1. Choice of Comparators

In its analysis of the Consultation topics, the Authority has chosen four comparator markets, which might be based on a benchmark report from Fide Partners it received on 2 May 2018.⁴

The Bermudian telecommunications market is however, as the Authority would agree, quite different to the large markets the Authority used as international precedents, the USA, Canada, Australia, the UK and the EU and Australia.

In the case of Bermuda, similar to Australia, the incentive and opportunity for Internet Service Providers (ISPs) to degrade, discriminate or block certain internet traffic in favour of other traffic would not be evident, unless there is a contrary conclusion by the Authority.⁵

If the EU is treated as a single economic block then these four markets are amongst the largest economies in the world. They have large and diverse internal economies capable of supporting significant indigenous digital sectors. In addition, they have well developed regulatory frameworks which cover not just telecommunications but consumer protection and competition laws, content regulation and technical standards.

In contrast, Bermuda is a small economy with a limited capacity to internally support indigenous digital sectors. The wider regulatory framework is not as developed as the comparators that the Authority has chosen.

Lewin, Forsyth and Wood, in their report⁶, in their report, highlights challenges facing telecommunications regulators in the Caribbean, the five island microstates of Dominica, Grenada, St Kitts and Nevis, St Lucia and St Vincent & the Grenadines, which are not dissimilar to the situation in Bermuda, provide key recommendations for telecommunications regulators, which include:

⁴ The Authority refers to a benchmark report by Fide Partners (paragraph 31 of the Consultation). For the records, the Authority has not released a copy of this benchmark report to the public.

⁵ Digicel notes that the Authority did not include its finding based on the information provided by the ICOL holders in February 2018, which would have been useful to the public for the purpose of responding this Consultation (see paragraph 30 of the Consultation).

⁶ Lewin, Forsyth and Wood, "Effective regulation of telecommunications in the island states of the Caribbean - <https://plumconsulting.co.uk/effective-telecoms-regulation-island-states-caribbean/>, a copy is attached in this submission, as Annex 3.

“carry out regulatory impact assessments on major regulatory decisions to ensure that the incremental benefits exceed the incremental costs and develop simpler (and different) regulation to keep regulatory costs down”.

Simply approaching the issue of the open internet by using the four (sometimes three or less) comparators as a regulatory international benchmark on the open internet without a detailed examination of whether it is appropriate here, is likely to lead to adverse outcomes for the telecommunications sector in Bermuda.

Digicel is of the view that the Authority’s analysis of the issues in respect of the topic of the open Internet does not adequately take account of the specific requirements of the Bermudian economy and telecommunications market. Digicel urges the Authority to take account of the conclusions reached by Professors Greenstein, Peitz and Valletti in their 2016 paper *“Net Neutrality: A Fast Lane to Understanding the Trade-offs”*. In concluding their paper, the authors set out that⁷:

“It should come as no surprise, therefore, that the thrust of the conclusions from economic analysis tilt against simplistic declarations in favor or against net neutrality. This suggests that bold and sweeping recommendations and interventions, given the current state of empirical knowledge, have a substantial chance of being misguided.”

In the region, in July 2018 the Telecommunications Authority of Trinidad and Tobago (TATT) issued a Discussion Paper on Net Neutrality and OTT Services in Trinidad and Tobago.⁸ Having considered the specific market conditions in Trinidad and Tobago, TATT’s preliminary position is to adopt a light touch approach to net neutrality. In particular it is proposing an *ex post* approach to the issues of zero rating and paid prioritization, which will not have blanket prohibitions and regulatory intervention on most practices, but instead, unless they cause either competition or consumer harm, these will be permitted. It has based its views on a reasoned assessment of the conditions of the local market. A more in depth analysis of the specific of the Bermudian market would, we believe, lead the Authority to reach similar conclusions to TATT.

2. Market Dynamics and Promoting Local Innovation

⁷ Page 28, <http://www.nber.org/papers/w21950.pdf>

⁸https://tatt.org.tt/DesktopModules/Bring2mind/DMX/Download.aspx?Command=Core_Download&EntryId=1125&PortalId=0&TabId=222

Both main operators in Bermuda have made significant investment in their fixed and mobile networks and now face the challenge of recovering this network investment. Bermudians, as a result, now have fixed and mobile service providers, with high speed connectivity available almost ubiquitously in both sectors. In terms of content, neither of the main local network operators have significant content portfolios, which can be seen from the USA, therefore the extent of their vertical integration is limited. Where there is original content this is locally or regionally focussed of the type that is often under pressure from large global content providers, which have extensive original content portfolios, but which is not reflective of smaller markets such as Bermuda.

Digicel believes that there is value in shaping policies that ensure a level playing field for all, including emerging local content providers. However this is something that requires careful analysis.

For example, will any emerging content provider from Bermuda realistically be able to compete with the likes of Google Maps which can rely on the data from phones which are powered by the Android App?

As Greenstein, Peitz and Valletti outlined in their 2016 paper⁹:

“One often hears the concern that strict net neutrality rules would help small innovative firms because large content providers are better able to pay for prioritization. However, as large content providers have other means to deal with the congestion issue, it may instead be the small innovative firms which need the possibility of prioritized access, because it does not require larger forms of up-front investments which they can ill afford.”

For example, large well established video content providers may have enough customers and sufficient cash flow to be able to invest in local content caches. These mean that their services are not exposed to off-island capacity constraints and so can consistently offer high levels of Quality of Service (QoS). To be able to compete, smaller market entrants may be willing and able to pay for prioritised access on an “opex” basis which allows spend to be matched to uptake, until such time as they reach sufficient scale to be able to afford the capital intensive course of implementing caches.

In addition, the market for local content providers is likely to be too small to foster commercial success, if the local market of broadband users does not expand. Therefore policies which

⁹ Ibid. Page 23.

encourage network investment and broadband adoption also promote local innovation by content providers.

In promoting local innovation, the Authority should be realistic as to the extent to which local App developers are likely to be hindered by an overly strict approach to net neutrality. The likely initial users for such local apps are more likely to be in the local market. Therefore policies and regulation which foster network investment and coverage are going to increase the addressable base for such Apps to a far greater extent than overly strict net neutrality rules, which will have limited effect on uptake.

3. Effects of Net Neutrality

The difficulty with assessing evidence for the investment impacts of net neutrality rules is that each jurisdiction has different market conditions and therefore direct comparisons between countries with and without net neutrality rules are not readily made.

The most high profile country with “before and after” data from the introduction of net neutrality rules is the USA. The FCC found that the introduction of such rules had inhibited investment by network operators. While some have questioned the basis of the calculation, it remains the fact that the statutory regulator made this finding. On the counterfactual, Digicel is unaware of any situations where it is claimed that the introduction of net neutrality rules spurred network investment. We have on one hand contested data arguing that net neutrality rules adversely impact investment against no data which supports the proposition it does not.

It should be remembered that the USA only had net neutrality rules in place for some 18 months before they were removed again. The fact that largest internet companies in the world are based in the USA demonstrates that the lack of net neutrality rules has not been a limitation on innovation and growth of on-line companies.

The EU’s approach to the issue has been lighter touch than the USA, with commercial practices such as zero rating being permitted, provided they do not contravene the EU regulation. It should be emphasised that the EU’s approach has not considered net neutrality issues in isolation. Rather its intervention or regulatory framework is part of a wider framework dealing with the digital economy. This framework includes strong and generally applicable data protection rules, strong enforcement of competition law against on-line providers, equal application of consumer protection rules to online platforms, holding online platforms to similar standards for hosted content as traditional media and moves to ensure that on line

players pay their fair share of tax. Until Bermuda is in a position to also follow such a holistic approach, an overly restrictive implementation of net neutrality principles is likely to lead to adverse outcomes for their economies and societies as the digital divide widens as a result.

4. Regulatory Approach and proposed Regulatory Framework

Digicel notes that the Authority has proposed moving to a less intrusive approach from a pre-notification/approval or heavy regulation as part of the recent Consultation on the Market Review of the electronic communications sector.¹⁰ It is therefore somewhat surprising that the Authority's proposals under this Consultation represent a move to prescriptive net neutrality regulations which are intrusive *ex ante* interventions in the commercial and technical activities of ICOL holders.

In the Consultation, at paragraph 27, the Authority sets out its objectives under Section 5 of the Electronic Communications Act 2011 (the ECA). In addition to Section 5 of the ECA, Section 16 of the Regulatory Authority Act 2011 (the RAA) sets out a mandatory set of criteria which the Authority "*shall*" follow when exercising its functions. The provisions of Section 16(b), (c) and (e) are particularly relevant to the issue of the intervention proposed on foot of the current Consultation.

Section 16 (b) sets out that the Authority shall "*rely on market forces, where practicable*". In this regard it is notable that the Australian regulatory has opted against imposing net neutrality rules in part on the basis that market forces obviate the need for intervention. The Authority has not assessed the extent to which attempts by an ICOL holder to stifle or restrict access to content desired by consumers is a commercially viable course of action in the light of competitive pressure. Digicel strongly believes that market forces act as a powerful constraint on operators. If there is consumer demand for services, any attempts to place constraints on them are almost always circumvented. While network operators initially fought against OTT voice services, these are now often a zero rated feature of network operators' data plans. This type of commercial offering is valued by customers and is seen by operators as a commercial differentiator. This shift has not come about through regulatory intervention, but rather through competitive market pressure. It is notable that while net neutrality rules might have prevented network operators blocking OTT voice, they would also have prevented them from offering packages which have

¹⁰ The Regulatory Authority, "*Market review of the electronic communications sector*", Matter: 2019021501, Date: 15 February 2019 - <https://rab.bm/documents/market-review-consultation/?wpdmdl=13600&refresh=5d13b6eccccca91561573100>

zero rated elements. These services are popular with consumers and encourage uptake and engagement with digital services.

It would appear, therefore, that many of the concerns which the Authority outlines would be addressed in the normal course by market forces and that the wide ranging ex ante intervention proposed by the Authority as its preliminary position is, far in excess of what is permitted by virtue of this section.

Section 16 (c) of the RAA requires that the Authority shall *“rely on self-regulation and co-regulation, where practicable”*. In this context, as Digicel brings this to the Authority’s attention that operators across the region including Digicel have committed to abiding by the CANTO “Code of Practice on Safeguarding the Open Internet”, which commits operators to not throttling or blocking legal content. Since the adoption of this Code in 2016, Digicel is unaware of any suggestion that operators have not fully respected its provisions. In light of this evidence of self-regulation, the Authority’s proposals for market intervention to address the same issues would appear to be in excess of what is permitted by virtue of Section 16 (c) of the RAA.

Section 16 (e) of the RAA sets out that the Authority shall *“act only in cases in which action is needed”*. This is a significant boundary on the nature of any market intervention by the Authority. While Digicel can see merit in the argument that clarity on the Authority’s position in respect of the open internet might be needed, it is not convinced that the Authority has passed the required *“necessity”* threshold in respect of the specific measures that it has proposed. The *ex post* approach proposed by TATT would, in our view, meet the *“necessity”* threshold as it means that there is intervention only where the specifics of a particular issue require it. The Authority, similar to the Australian regulator, the ACCC, already has power to *“address any anti-competitive conduct”*.

Digicel notes that all of these focus on promoting the Bermudian electronic communications sector. In light of this, any proposed measures must be assessed on the extent to which they promote and support all aspects of the Bermudian electronics communications sector, and an assessment must be carried out which considers their impact on the ability of services providers to invest in infrastructure and services in Bermuda. The objectives place an obligation of the Authority to favour local operators, ICOL holders rather than overseas players, when balancing the issues and considering the impact or proposed measures.

Similarly the lighter touch net neutrality rules in the EU than the USA’s approach and the absence of net neutrality rules in Australia have not raised concerns about the potential harms relied by

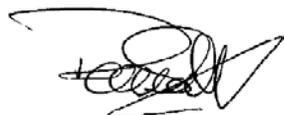
the Authority as the justification for its intervention actually crystallising. Across the Caribbean region, there are countries of similar scale and economic structure as Bermuda which do not have net neutrality regulations in place and again there is no indication that the potential harms relied by the Authority as the justification for its intervention have any meaningful prospect of materialising.

Conclusion

While there is broad agreement that the Internet must remain open, the concept of “net neutrality” is just that, a concept. It is not an immutable law of nature. The Authority should take an evidence based approach, when considering the issues and must also take account of the specific circumstances of the Bermudian market for the Bermudian consumers.

In this context, the Authority should adopt a cautious approach to net neutrality rules, and intervene only when is objectively justified. This means that there should be no blanket prohibitions on commercial practices either directly or indirectly, by enforcing wide ranging non-discrimination obligations. Instead Authority should permit practices unless they cause consumer or competition harm and, unless demonstrably necessary, assess this on an ex post case by case basis.

Yours sincerely,



.....

Paul Stafford

CEO- Digicel (Bermuda)

Annex 1- Responses to Consultation Questions

Qs	Digicel Response
	Zero-rating

1-4 Q 1) Please comment on the proposal of assessing zero-rating tariffs and whether the Authority should take a position as part of its open internet framework.

Digicel believes that the Authority's examination of the issue of zero rating does not fully consider all of the possible mechanisms nor all of possible outcomes. Digicel also notes that in the context of economies such as Bermuda's, the positive aspects of zero rating we have identified below have not been adequately set out nor considered by the Authority.

While proponents of a prohibition on zero rating can construct scenarios with negative outcomes, it is equally possible to see some positive scenarios. For example a bank wishing to launch and promote on-line banking may be prepared to "sponsor" the data associated with their App so it is free to the end users. As the ability to conduct on-line purchasing is a key enabler for participation in the digital economy, there is arguably an overall consumer welfare benefit as it promotes the adoption of on-line banking.

Internet Service Provider (ISP) initiated zero rating of messaging apps, which arguably compete with the ISP's own traditional voice and SMS services, would be justified as it promotes the penetration of smartphones which in turn facilitates the use of other data services. Zero rating of educational sites such as Wikipedia and government websites initiated by the government or ISP can act as a method to facilitate education and the adoption of e-Government services, which is the current Bermudian government tries to promote.

We strongly believe that the inclusion of Bermudian websites, for example, applications or content within data bundle allowances could help offset scale disadvantages that many Bermudian local businesses face when attempting to compete with global content providers.

Digicel notes that zero rating in the form of "loss leaders" or inclusive offers are common in other sectors such as supermarkets, branded beverages included in "combo meals" in fast food chains. These are not harmful to either competition or consumers in principle only where they are accompanied by some type of exclusionary mechanism.

In the on-line environment, the "ad funded" model for many social media platforms "zero rates" the platform access and use for the end users. If in principle it is an acceptable business model for the likes of Facebook and Google, then Digicel cannot discern why it should be prohibited as a business model for ISPs.

The Authority has a key role in representing the interests of Bermudian consumers. While exercising this function it must thread a fine line between protecting these interests and substituting its own preferences and requirements for those which would be selected by consumers, if they were presented with choice in a differentiated market. Consumers may display either a preference for particular offerings or a low priority for issues such as voice Quality of Services (QoS), as

demonstrated by their increasing use of unregulated OTT voice services with no defined minimum quality standards. In representing consumers, the Authority should give a high weighting to the empirical evidence of consumer preferences as reflected in the uptake of data plans which display features such as zero rating.

Digicel believes there is merit in ensuring the possibility of the use of 'sponsored data' whereby a business could pay Digicel to make data available to customers for a lower/zero price. Digicel notes that this commercial model is not dissimilar to that used by on-line platforms where services are provided for "free" to end users but paid for by advertisers.

Q 2) Please comment on the proposed criteria for assessing whether zero-rating tariffs should be permitted.

Digicel notes that the Authority is proposing to adopt exactly the same criteria used by the Canadian framework, without setting out its reasoning for adopting this criteria over other jurisdictions (see paragraphs 47 and 51). It is therefore difficult to meaningfully engage with the Authority's selection process and reasoning on this.

However Digicel is of the view that the criteria proposed by the Authority are overly narrow and are structured in a way which implicitly contain an element of pre-judgement. In particular the first two points are restricted to consideration of internet related issues. These criteria are much narrower than the range of the Authority's objectives set in the ECA and the RAA. In particular both of these have a focus on promoting Bermudian companies, investment and innovation. In this context, the criteria proposed by the Authority, which is not based on any other international precedents nor local market sector, do not seem to be compatible with the Authority's statutory role.

In addition to aligning to the objectives of the Authority, any criteria which inform a decision by the Authority to intervene in the market must also conform to the mandatory requirements of Section 16 of the RAA.

Q 3) Please comment on the preliminary position described by the Authority relating to zero-rating.

The Authority's preliminary position is set out as follows:

"It is the preliminary position of the Authority that zero-rated tariffs raise concerns regarding their anti-competitive nature and shall not be permitted."

Digicel strongly disagrees with this proposed position and believe that it is seriously flawed and any approach based on this position by the Authority will have adverse impacts on the electronic communications sector in Bermuda and in particular limit the scope for non-price competitive differentiation between ICOL holders (and going forward RCOL holders).

The blanket approach proposed by the Authority where the default position is that zero rating “*shall not be permitted*” means that it would prohibit circumstances where zero rating would provide direct benefits to end users, facilitate investment recovery, lead to competitive differentiation by ISPs increasing consumer choice, prompt innovation in other sectors of the Bermudian economy or allow local companies compete more effectively against global Content Delivery Networks.

Further, the Authority will note that the blanket prohibition, as currently proposed by the Authority, is not a feature of the comparator markets selected by the Authority, especially the FCC in the USA now allows zero-rating tariffs under the new Internet Freedom Order²², as set out at paragraph 50 of the Consultation.

In the absence of evidence supporting the Authority’s concerns, anti-competitive behaviours or the potential harms outlined by the Authority in Bermuda, Digicel does not believe that the interests of Bermudian citizens, the Bermudian electronic communications sector or its wider economy in Bermuda are served by the Authority’s proposed approach.

Q 4) Please comment on how the Authority can oversee tariffs offered by ICOLs, specifically if the tariffs may raise concerns relating to an open internet framework.

As it has set out previously in its submission in 2018, Digicel believes that the imposition of obligations in respect of zero rating are not justified or necessary at this time. Even if the Authority is minded to impose obligations, one would argue that any such obligations should be based on a light touch *ex post* approach and the default should be that such commercial practices are allowed, unless it can be demonstrated on a case by case basis that a particular instance causes harm to the consumers. In this context, market monitoring and information gathering in response to complaints are sufficient to allow the Authority oversee retail tariffs in respect of zero rating.

Traffic management (i.e IPTV/VOIP); Blocking, Throttling or Paid/ affiliate prioritization

5- Q 5) Please comment on the Authority’s proposed position regarding traffic management.

10 Digicel does not agree with the approach proposed by the Authority, an explicit banning of the traffic management practices, as set out in our responses below. We believe that not only in “justifiable circumstances” but also reasonable traffic management at the technical level is absolutely necessary

²² FCC - Wireless Telecommunication Bureau, Policy Review of Mobile Broadband Operators’ Sponsored Data Offerings for Zero Rated Content and Services, 11 January 2017 (‘DOC-342987A1.pdf’)

for the proper operation and maintenance of networks. To deny network operators the tools they need to ensure network and service integrity and continuity runs the risk of adverse outcomes for the end users of networks and its services.

Examples where traffic management was necessary to protect the network and wider service quality include the period immediately after the 911 attacks in the US where some non-US based network operators had to throttle traffic directed at US news outlet sites as the volume of traffic started to congest international links. Similarly facebook's turning on of its video autoplay feature resulted in a step-change in peak network utilization of over 10% for some network operators. Where this caused congestion throttling of traffic from the facebook domain address was a necessary measure to protect other services. This was required to protect both congestion on international links and on the mobile air interface. Finally Netflix's decision to make all episodes of an entire season on its series "Game of Cards" available at the same time also resulted in a step change in peak network usage as viewers "binge-watched" the entire series over the release weekend. While all three of these examples are caused by external shocks, two of them are due to commercial decisions of the content platforms to unilaterally change their service offering. It would not be equitable to allow the content providers the freedom to have material impacts on networks without giving network operators the flexibility to protect other content providers and customers where these unilateral decisions have adverse impacts on others.

Q 6) Please comment on the specific idea of banning blocking, throttling or prioritisation of internet access traffic.

In relation to blocking and throttling, Digicel has pointed out earlier in its response that operators in the region, including Digicel, have already committed to a policy of not blocking or throttling legal content²³. Users may be willing and desire to pay for the blocking of certain lawful content. Examples might include network level ad-blocking, parental controls relating to content that they consider inappropriate but which is otherwise lawful. Where un-filtered versions are also available from network operators it is not clear that either competition or consumer harm arises from such user endorsed blocking. Similarly users may wish to restrict the proportion of their data allowance that is consumed by video content. In this scenario package plans which offer to throttle certain high usage content types to limit bundle consumption may be perfectly acceptable from a competition and consumer welfare perspective.

The Authority should not place any restriction on consumer selected blocking or throttling, provided that there is no foreclosure or other clearly identifiable market harm.

²³ See Annex 2 CANTO Code of Conduct.

In relation to paid for prioritization, for example, a future internet of things (IoT) subscription based application relating to home or personal security may wish to offer prioritized data for alarms etc. In such a case there would not necessarily be foreclosure nor cause consumer harm. Content providers and end users may be willing to pay lower prices for deprioritized data. In the case of the alarm application outlined above for prioritized data the content has a time critical component. Similar monitoring devices could be used to capture non-time critical data. For example environmental data that is processed retrospectively to determine energy efficiency. In this scenario the application provider may be prepared to accept de-prioritised data in exchange for a lower data price. As the number of connected devices grows this type of commercial incentive may prove important in offering non-technical mechanisms for shifting network traffic spikes to alleviate congestion.

The flexibility to offer this commercial service could potentially spur innovation rather than inhibit it.

As regards differential quality of service it is already accepted that ISPs are permitted to charge differently for different speeds of access. For example a 25Mbit/s connection may be cheaper than a 50Mbit/s connection. If the end user only requires the higher speed for certain content (for example streaming a UHD sports subscription) it may be that forcing them to pay for the higher speed for all content places the preferred content outside of their ability to pay.

Similarly low latency required for on-line or other applications may be too expensive to apply ubiquitously at a network level. In this scenario the inability of end users to selectively pay for the enhanced capability might prevent the facility being offered at all.

Given the nascent nature of 5G deployment, it is likely that new commercial models for 5G based services will emerge. Some of these may rely on prioritisation or de-prioritisation. It has been said that ISPs shouldn't pick winners, this also holds true for regulators. The Authority should be careful not prejudice the market and restrict potential avenues of innovation by introducing rules which embed and reinforce current market structures.

Q 7) Please comment on how and when traffic management should be allowed and how the behaviour of ICOLs can be assessed as part of an open internet framework.

We note that the Authority has placed two distinct issues under the heading of traffic management.

The first of these relates to the technical management of network capacity to ensure the integrity and quality of services. Based on our position as set out in response to Question 5) we believe that network operators must have the flexibility to ensure that it is configured and utilised in a manner which optimise the performance for the maximum number of services and services providers and the maximum number of end users within the constraints of available network capacity. Given the almost infinite range of potential scenarios, provided such network management can be objectively

justified and is not unduly discriminatory, there should not be any advance blanket prohibit or limitation as to what form such traffic management might take.

The other relates to the configuration of the network for commercial reasons. Based on position as set out in response to Question 6), it is Digicel's position that there should not be a blanket prohibition on prioritisation or other commercial traffic management practices but that the market should be free to evolve within defined boundaries which are no more than are necessary to prevent anti-competitive behaviour.

Q 8) Please comment on the need to recognise specific services that may be subject to traffic management that could otherwise be considered a breach of an open internet framework.

The term "traffic management" usually has connotations of interventions which result in the types of discriminations that could otherwise be considered a breach of an open internet framework. Digicel believes that network operators must have the flexibility to protect their networks, customers and other content service providers. While such interventions should be capable of being objectively justified they may result in traffic management interventions which on the face of it appear to be discriminatory. For example, if one video content platform introduces a feature in an unplanned manner which causes unexpected step changes in peak network load then it may be objectively justified to discriminate against this provider by throttling traffic to/from its site until the network capacity can be augmented. Given the evolving nature of internet services, Digicel does not believe that it is prudent or possible to try to forecast the types of services.

In terms of the commercial practices which might give rise to differential performance there is a substantial overlap between this and the issue of prioritisation canvassed in Question 6). For the reasons set out in response to Question 6), Digicel does not believe that it is appropriate or in the interests of Bermudian consumers that there is a blanket ban on such commercial practices.

Q 9) Please identify the specific services and how they need to be managed. How can it be ensured that these services do not impinge on general internet access?

Digicel disagrees with the Authority's position on this issue. IPTV and carrier supplied Voice over broadband services are not internet services, which are supplied by services providers over their own access networks usually in a bundle with broadband internet access. Such services are usually subject to local regulations either in terms of quality, content or other aspects. Where they consume capacity on the access path connecting the end user, there is a residual capacity remaining for accessing content and services on the internet. There should be no obligation on operators to automatically match the capacity for services connected directly to their local networks and for

which they have a direct contractual relationship with the end-user to the capacity that is used to access the public internet on the basis that the end-user might wish to connect to an OTT service of a particular type. Provided there is transparency, as regards the level of residual capacity available to the end user on the access path then the customer can decide whether or not to buy a higher speed connection to increase the capacity available for internet access, if required. Where the headline speed of the offered broadband service already takes account of the capacity used for the delivery of directly contracted services such as IPTV then no further clarification or communication in this regard is needed between the service provider and customers.

Q 10) Please comment on the proposal that OTT services should not perform worse as described in the proposed approach.

Digicel does not believe that there should be any a priori ban on commercial practices that result in differential performance. The Authority should adopt an *ex post* monitoring approach to assessing such concerns as and when they arise. Provided such practices do not cause either competition issues or a consumer welfare deficit, then the Authority should not intervene. This *ex post* approach is in line what TATT has proposed and represents an appropriate balancing of the issues.

End-user right to access and distribute legal content of their choice

11 Q 11) Please comment on the Authority’s proposed position – that end-users have the explicit right to access and distribute legal content, as well use legal applications and services, of their choice on the internet

Much of the argument in favour of net neutrality talks about access to information or services and the ability of an ISP to limit or restrict such access. These arguments are couched in a way which implies there is a single ISP unconstrained by competitive pressures from other ISPs.

In reality in Bermuda this is not the case. Such arguments often set out a number of hypothetical situations regarding the restriction of access to information by ISPs with few examples of where this occurs. On the other hand these arguments rarely, if ever, set out an analysis of the actual role that social media platforms play in providing access to information. Some 4 in 10 Americans get their news via facebook²⁴. Issues with the editorial policies of such platforms have been the subject of media reports and their acceptable use policies and so called “community rules” represent greater actual constraints on end-users’ access to content than the hypothetical scenarios set out in respect of ISP. Further as such on-line platforms have high penetration across users of all ISPs in a market the impact of such constraints is higher than any potential restrictions introduced by a single ISP.

²⁴ <http://www.journalism.org/2018/09/10/news-use-across-social-media-platforms-2018/>

By way of another example following the introduction of Data Protection legislation in the EU, we have seen many examples of the US based content providers restricting access to their content for the European consumers rather than give these end users the privacy rights they have been afforded under the European law.

In assessing the proportionality of imposing *ex ante* restrictions on operators in the form of net neutrality obligations, the Authority must weigh any evidence that such behaviour is not only possible and must also consider whether such behaviour is likely to be effective, given the plurality of information sources on the internet.

Digicel does not unilaterally block any content. It is our position that if we receive requests from either competent authorities or verified rights owners to block or restrict access to IP addresses hosting unauthorised or illegal content, we would respond to such requests on their merits. While we have not received requests in Bermuda, we have received requests from verified content rights owners in other markets to block IP addresses that were used to host unauthorised content. Digicel envisages that should market demand arise, we would be willing to support offerings which allowed user specified restrictions on the range of accessible websites, such offerings might include parental controls, business accounts with access to white lists of sites, network supported ad blocking to compete with app enabled ad blocking and security products for IoT devices restricting access to sites hosting the service as a security feature.

In practice this provision appears to be a duplicate of and have the same effects as the proposals in relation to blocking and throttling.

The Authority must consider whether in a situation where regulation is to be introduced that an *ex post* approach would be a more proportionate market intervention.

End-user choice of terminal equipment

12 Q 12) Please comment on the questions raised by the Authority regarding end-users right to choose their own terminal equipment

Digicel notes the Authority's view that in respect of end-users' right to choose their own termination equipment that *"The Authority believes that this right of choice functions appropriately in the mobile market in Bermuda."* (see paragraph 83).

Digicel further notes that this is facilitated by the existence of standards technical standards governing handsets.

In terms of the fixed market the question arises as to where the network demarcation point is located. For fibre based access Digicel is strongly of the view that this is on the customer side of the Optical Network Termination (ONT) and for xDSL based networks it is at the Network Termination

Point of the PSTN network. This means that the end user equipment that should be in scope for consideration is that which attaches on the customer sides of these demarcation points.

The Authority will note Digicel and most operators in Bermuda will respect consumers' choice to the extent it is commercially feasible. While in theory, any terminal equipment which conforms to the appropriate technical standards could be used by end users, such devices have large variability in quality and in conformance to the latest versions of the standards. This leads to a situation where the correct and continuous operation of the broadband service is not certain, unless operator supplied terminal equipment is used.

Q 13) Please comment on the Authority's proposed position on end-users right to choose their own terminal equipment.

While Digicel has no objection in principle to the use of appropriately approved terminal equipment any such usage must come with a clear acknowledgement on the part of the consumer that the use of their own device may limit operators' ability remotely manage and diagnose customer faults. In addition where end-users choose to use such devices they must take responsibility for the security and integrity of these devices.

Q 14) Please comment on the Authority's proposed position that operators will be obliged to enable end-users choice.

Digicel has no objection to a requirement that ICOL holders maintain a list of approved compatible devices. However this is conditional on the suppliers of such devices being responsible for the costs of obtaining such approval. The process and the costs should be reviewed by the Authority to ensure that the process is not too onerous and that the pricing is does not recover costs plus a reasonable rate of return. ICOL holders should not be (and cannot be) required to support 3rd party devices in terms of faults, upgrades or replacements.

ISP Obligations

15 Q 15) Please comment on the proposals of the Authority regarding obligations on ICOLs regarding:

a. Transparency regarding traffic management practices;

Digicel believes that high level information on traffic management practices and application-specific network behaviour is more than sufficient for end-users making purchasing decisions as to which ISP to choose.

The level of detail published should be sufficient to indicate whether differentiated network criteria are applied to different classes of services and the nature of the different treatments with an indication of the relative quality in offered performance.

In terms of *ad hoc* interventions designed to deal with unforeseen network circumstances such as network congestion, it is impossible for ISPs to set out what might occur in every conceivable event. Therefore transparency regarding the principles that the ISP will use in determining the appropriate *ad hoc* intervention is a proportionate way of meeting the Authority's objective.

b. Clarity on performance limitations;

Digicel believes that high level information on performance limitations in respect of volume, speed and any other quality parameters is more than sufficient for end-users making purchasing decisions as to which ISP to choose. As far as Digicel is aware this is the level of detail which is required by transparency provisions on most other jurisdictions.

c. Giving realistic expectations on speed performance;

Digicel notes that as part of its Market Review Consultation²⁵ the Authority is already consulting on the issue of exit remedies should actual speeds deviate significantly from advertised headlined speeds. This mechanism in practice means that advertised speeds must give realistic estimations of actual speeds. There would therefore seem to be no need for a separate obligation or requirement in this regard. In addition, consumers in Bermuda can test the network speed in real time using publicly available websites such as "Ookla".²⁶

d. Providing end-users with a clear route of complaint and remedy in the case of continuing failure in performance;

The Authority has an open consultation on consumer protection issues in the electronic communications sector²⁷ which covers the issue of complaints handling. Digicel believes that this aspect of the current consultation is a duplication of the other ongoing consultation and that the topic of complaints relating to the performance of the contracted for electronic communications service do not justify a separate consultation under the banner of the open internet.

Similarly the Authority has an ongoing consultation in respect of a review of the electronic communications market in Bermuda²⁸ and as part of its proposed interventions set out provisions relating to broadband speed remedies at paragraphs 586 to 589. This aspect of the current consultation is therefore another duplication.

²⁵ <https://rab.bm/documents/market-review-consultation/?wpdmdl=13600&refresh=5d13c274be7a81561576052>

²⁶ <https://www.speedtest.net/>

²⁷ <https://rab.bm/documents/principles-of-consumer-protection-consultation/?wpdmdl=13601&refresh=5d13c06679d1e1561575526>

²⁸ <https://rab.bm/documents/market-review-consultation/?wpdmdl=13600&refresh=5d13c274be7a81561576052>

Digicel does not believe that the issues canvassed under these questions are so distinguishable from the more general issues relating to the provision of an electronic communications services which are already being consulted on the by the Authority to justify the operational and administrative overhead associated with creation of separate complaints handling processes.

e. Ensuring the privacy of end-users and the protection of their personal data; and

There is a fundamental distinction between concerns relating to traffic management, zero rating, throttling and blocking and concerns relating to privacy. These should not be conflated. Net neutrality regulations are not the appropriate place to consider the policy issues relating to data protection and privacy.

Where a particular technology is necessary to ensure network and service integrity then it should not be prohibited based on privacy concerns. The correct approach is to separately define protections relating to the use of the personal data which might be accessible by virtue of the technology.

The Government of Bermuda has enacted the Personal Information Protection Act (PIPA), which received Royal Assent on July 27, 2016. In Digicel’s view this is the appropriate regulatory mechanism to deal with privacy and data protection concerns.

f. Updating end-users and the Authority if practices or performance changes.

Digicel agrees that customers should be informed within a reasonably short period following change to practices or performance.

Q 16) Please comment on the options identified in the proposed approach.

The Authority at paragraph 34 of its Consultation on consumer protection²⁹ set out proposals that *“Any Contract that, is longer than two (2) pages, including any attachments, annexes, or appendices, should be accompanied by a one (1) page Contract summary”*. This appears to be a recognition that requirements to provide information which are too extensive ultimately have the opposite effect of what was intended as end users are simply overwhelmed by the volume of information that operators must provide them. In this regard the Authority should distil the key items which are most germane to end-users when making purchasing decisions and limit any transparency obligations to these

Monitoring tools for the Authority

ISP regulatory surveys

²⁹ <https://rab.bm/documents/principles-of-consumer-protection-consultation/?wpdmdl=13601&refresh=5d13c06679d1e1561575526>

17	<p>Q 17) The draft Operator Questionnaire on open internet issues (Annex A) is provided as a draft template. Comments or amendments to this draft are invited.</p> <p>Given that the substantive aspect of this consultation is whether to impose obligations in respect of the open internet and the extent of those obligations, it is not possible to meaningfully comment on the draft survey. The information that is needed to be gathered will depend on the outcome of the Authority’s deliberations on the substantive aspects. Digicel therefore suggests that a further small separate consultation be conducted on the content of any survey once the main issues are settled and clear.</p>
<p>End-user involvement</p>	
18	<p>Q 18) Please comment on activities you believe the Authority could adopt to protect the principle of open internet and the quality of internet provision.</p> <p>The Authority has outlined a number of existing techniques it already uses to engage end-users in its oversight of the electronic communications sector. Where appropriate, Digicel believes that the Authority can leverage off its existing practices to effect similar oversight of “open internet” aspects of the sector.</p>
<p>Technical monitoring</p>	
19	<p>Q 19) Please provide your views on what the Authority should consider in acquiring a monitoring tool.</p> <p>The Authority itself points out at paragraph 143 of the Consultation that <i>“The Authority expects that any tests implemented to measure QoS would reflect its final open internet framework.”</i> This coupled with the fact that monitoring tools are likely to be proportionately expensive for a market as small as Bermuda, which means that the Authority should defer consideration of this issue, until it has clarity on its final position and after conducting a cost benefit analysis on the exact type on monitoring tool that would be appropriate for Bermuda, when taking account the specifics of the items it would measure and the likelihood that any deviations from the required standards would be detected in some other way either by end –users or content providers.</p>
<p>Contract monitoring</p>	
20	<p>Q 20) Please provide comments on whether the Authority should introduce aspects of contract review and the potential benefits or costs of such activities on operators and end-users.</p>

There are a wide range of consumer protection obligations on ICOL holders already in place, and the Authority has initiated and is in the process of Consulting on these³⁰. The Authority has not proposed a review and pre-approval process in respect of any of these consumer protection provisions. In Digicel's view, which the Authority and the consumers in Bermuda would agree, there is nothing so extraordinary about the concept of the open internet that it would justify a separate contract review and pre-approval process for broadband services.

The European precedent that the Authority used illustrates that 'the number of complaints submitted to European NRAs regarding net neutrality specifically has not been very significant (see paragraph 135). One can conclude that the existence of unlawful practices may be limited, despite the public awareness of net neutrality; therefore, no further action may be needed, instead of further public education.

In order to make sure that any such review process did not adversely impact on the normal operation of the market the Authority must commit to very short timelines for the conduct of such reviews, for the efficient and innovative market. There would also be an additional administrative and operational overhead and cost on both the Authority and operators. It is not clear that the Authority has the necessary resources to meet such commitments in all cases.

An *ex ante* review process imposes this overhead on 100% of new services offerings, while an *ex post* monitoring approach only requires the application of resources in those cases where there is a concern, which is clearly more efficient for the smaller market such as Bermuda.

In addition, there does not seem to be any material adverse consumer impact to an *ex post* monitoring process as compared to *ex-ante* review process.

The examples cited by the Authority appear to be few in number, and it has to be noted that the specific example cited in relation to Ofcom was a one off review rather than an ongoing process.

As part of its market supervision power, it is open to the Authority to conduct a review of contracts already in the market at a point in time. The question for the Authority to consider is whether, in the absence of at least some indication that there is an issue to be addressed, this process would, if introduced, represents an appropriate application of its limited resources, pursuant to Section 16 (b), (c) and (e) Regulatory principles of the RAA.

³⁰ <https://rab.bm/documents/principles-of-consumer-protection-consultation/?wpdmdl=13601&refresh=5d127806226a51561491462>

Annex 2- CANTO Code of Practice on Safeguarding the Open Internet

***Annex 3- Effective regulation of telecommunications in the island states of the Caribbean
(Plum Consulting Report)***

Annex 4- Net Neutrality (What is the best approach for the Caribbean?)