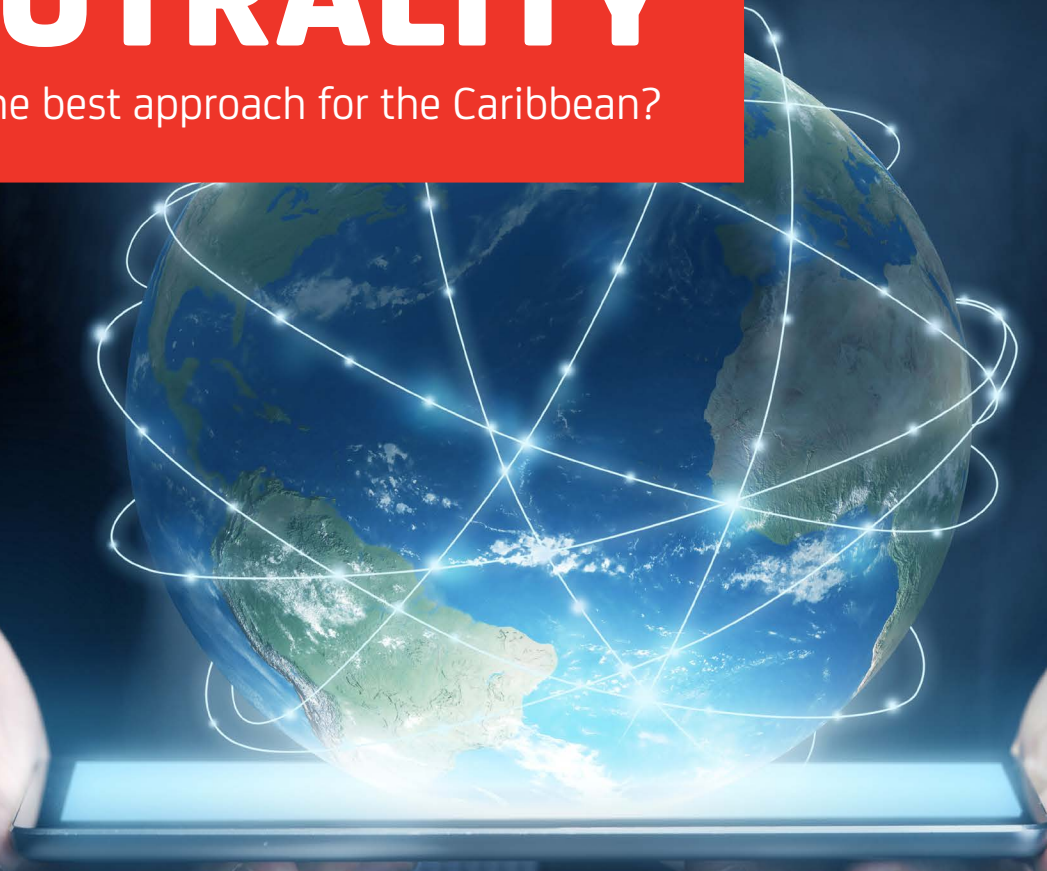


NET NEUTRALITY

What is the best approach for the Caribbean?



Digicel

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Welcome

I am delighted to welcome you to Digicel's publication on Net Neutrality. This is the first in a series of publications on important regulatory issues that we hope will assist with the debate on Net Neutrality in the Caribbean region. In Digicel we firmly believe in an open internet and the right of consumers to access legal content.

Digicel's priority is to bring world class services to consumers in the Caribbean and to do this Digicel is investing in the broadband networks of the future.

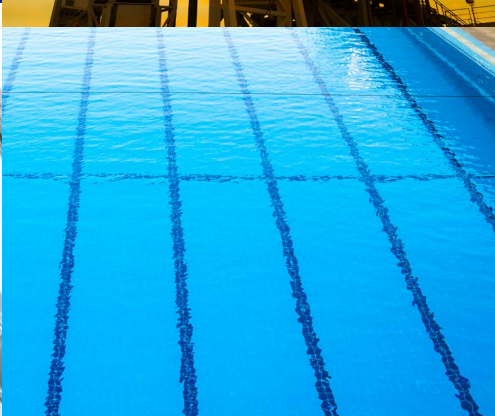
In order to ensure that consumers in the region enjoy world class services it is clear that we also need an internet which allows and encourages innovation and investment.

We are in an era of increasing convergence of services and the Internet of Things is emerging. In this context policy makers are facing important choices and these choices will shape the future of the Internet in the Caribbean.

We believe that it is important that policy makers take into account the full range of policy considerations before deciding on a course that will have long term impacts. I look forward to discussing this with you.

A handwritten signature in black ink, appearing to read 'Kenneth McGrath', written in a cursive style.

Kenneth McGrath
Chief Executive Officer
Caribbean and Central America



“ The notion that all data bits must be treated equally is a heavy-handed and misguided reaction to concerns about openness... treating every bit equally is not necessary, or even desirable, to ensure an open internet ”

- Ericsson

“ But the truth is all bits are not created equal ”

- Nicholas Negroponte

Introduction

Net Neutrality is a hot topic and has been the subject of much debate recently. Yet it remains a fairly uncertain concept and means different things to different people. While there is no one universally accepted definition, at its heart the debate is about whether there should be additional regulation placed on network operators in respect of traffic they carry to and from the public internet and, if so, exactly what form this should take.

Some voices call for a blanket regulation which would require network operators to treat all Internet traffic exactly the same, irrespective of its commercial or societal worth, irrespective of the actual technical requirements of the service the traffic is associated with, irrespective of whether end-users need or care if the traffic for the service they are using is treated differently or irrespective of who derives commercial benefit from that traffic.

Other voices seek a more sophisticated approach where some or all of the considerations outlined above are taken into account.

Proponents of the blanket approach include the major Internet content providers and for its advocates there is a common message to articulate - sometimes presented as ‘no censorship’ on the Internet. Their main concern is that operators will require payments from

them in return for prioritized delivery of their content to end users. In other words advocates of this concept believe that all Internet traffic should be treated equally irrespective of its demands on the Internet infrastructure or its commercial value to the person originating or consuming the content.

Those in favor of a more sophisticated approach face a more difficult task as there is less consensus on the exact balancing of the various considerations and a more detailed message to articulate. Broadband providers also believe that the Internet should be open and free from censorship but argue that a blanket approach favors the commercial interests of large Internet companies and places the providers of the Internet infrastructure at a disadvantage. These are supported by some of the leading technology companies who work to build the Internet and say that Net Neutrality rules would deter investment into broadband infrastructure.

The danger for regulators and policymakers in the Caribbean is that while the blanket approach seems to offer a straightforward recipe for market intervention it could be harmful in a volatile and rapidly evolving “converged” environment and hinder the rollout of broadband networks in the Caribbean.



The converging world

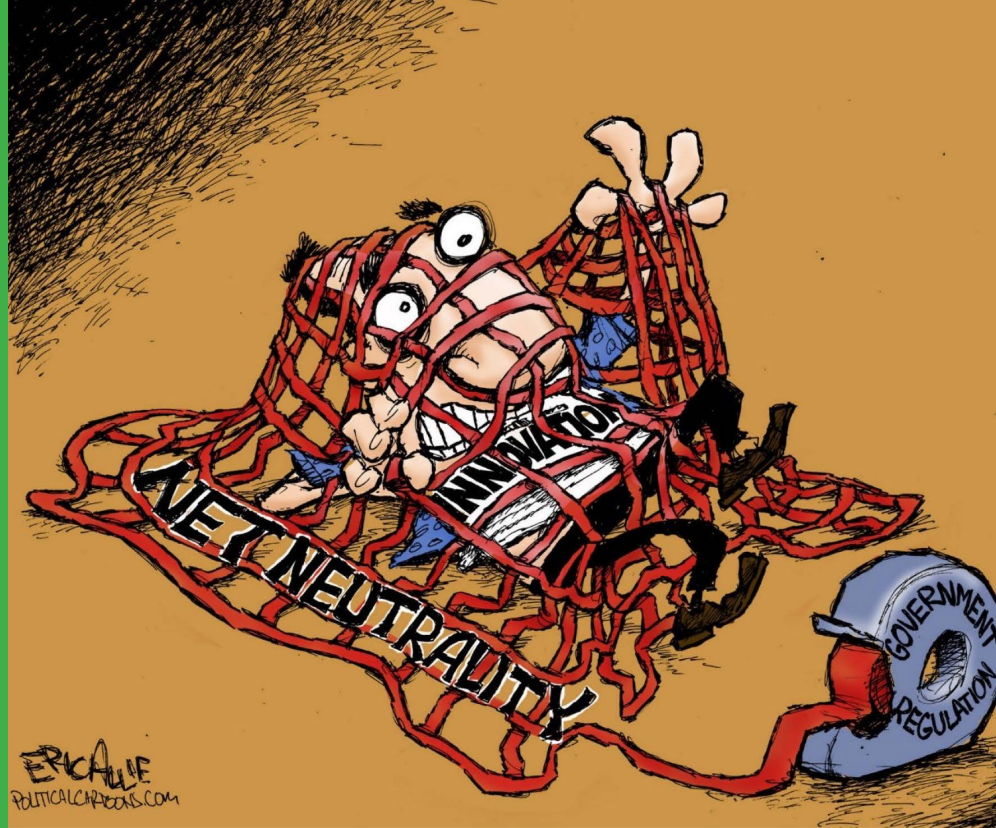
Not so long ago consumers bought fixed voice and broadband services from one company, mobile phone voice and messaging services from another, and TV from yet another. New movies were in the cinema or bought or rented on video or DVD. Reference books like Encyclopaedia Britannica were found in the local library or sold door to door.

Now Amazon sells ebooks and will also stream videos to you and in some places deliver your groceries. Films and TV series can be streamed from Netflix who also produce their own content. Mobile companies will sell internet access and fixed telephone companies will sell mobile. Some phone companies will sell TV and your old cable provider will sell you broadband. Companies that previously would have been used to search for information, such as, Google now write the software that runs your mobile phone and are looking to introduce driverless cars.

The list goes on and that's even before we've started to imagine the changes the so called 'Internet of Things' will bring. In this converging world it's tough to figure out who or what to regulate.

“ Rules treating all data equally would either over-provision resources for devices that do not require real-time communications or could endanger critical uses, like self-driving automobiles, by failing to prioritize their communications over others. ”

- Ericsson



Barrier to investment

For the Caribbean a significant concern is that restrictive Net Neutrality rules will deter investment in broadband networks. This is a particular worry as investment is urgently needed to, quite literally, bring the Caribbean up to speed with other regions.

The imposition of Net Neutrality rules that limit experimentation with new business models and network management practices will also reduce the incentive

of network operators to enhance functionality of their networks and thereby undermine the business case for investing in higher capacity broadband networks. In the US AT&T recently announced that it would pause fibre spending based on the uncertainty caused by the introduction of restrictive Net Neutrality rules in the US by the FCC.

Proponents of restrictive Net Neutrality rules argue that giving priority to the delivery of any Internet services should be prohibited. This just does not reflect reality as some packets of data are more valuable and useful than others. For example packets of data sent between government departments may be far more urgent than “selfies” posted on Facebook. Another example would be that torrent downloaders could squeeze out video conferencing between hospitals trying to do remote consultations.

In spite of what the purists say all data is not equal. The reality is that available capacity on any broadband network is a limited resource and this resource has a value. Users who place a higher value on priority delivery of their content should be able to secure such priority from operators.

Prioritization allows operators to optimize the use of their networks, reducing costs and also allows them to tailor pricing according to users demand for capacity. There is no reason why this should in any way impact on the experience of consumers – after all operators compete against each other and need to ensure that end users enjoy the best quality of service possible. Even if this were not the case minimum quality of service standards could ensure that this remains the case.

Naturally it is in the interests of US based content providers to avoid the costs of priority delivery themselves and for delivery costs to be borne by end users via the price of their network connection. It is therefore no coincidence that rules prohibiting prioritization were introduced in the home market of the major content providers and no doubt some of these are lobbying for this outcome in the Caribbean also.

The question that must be asked is what is in the best interest of consumers in the region? If content providers are willing to pay for priority delivery of certain data packets operators do not have to pass these costs on to end users – in effect consumers who do not want and can ill afford the high priority traffic would not have to subsidize the delivery costs of content providers.

This is of particular relevance in the Caribbean as content providers are typically based outside of the region while being able to afford access to broadband is a challenge in many Caribbean nations. One study estimated that operators could reduce end user prices US\$5-\$10 per user per month if content providers contribute to the cost of priority delivery.



Policy goals

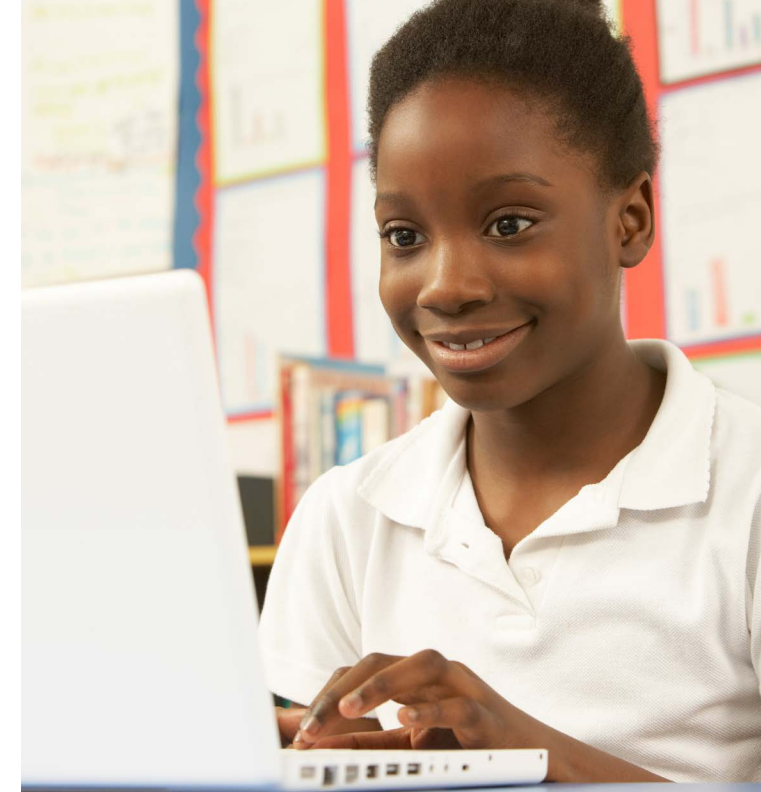
Developing any strategy in respect of Net Neutrality can only be done when policymakers and regulators have a clear policy framework and policy goals to test whether any proposed approach is actually fit for purpose and deliver the maximum overall benefits to the various stakeholders based on the actual conditions in their local market.

Some of the policy questions that Digicel believes need to be clarified before a Net Neutrality approach can be developed and decided on include:

- Do we want to maximise broadband connectivity?
- Do we want to maximise Internet usage?
- The extent to which inclusiveness is a goal
- Do we want to encourage network investment?
- Do we believe that the commercial benefits of the converged Internet should be concentrated or distributed?
- The extent to which different services and service providers (both traditional and converged) need or should be protected.

Entirely separately there is a structural question of whether any Net Neutrality intervention lives alongside, and is in addition to, existing regulation or whether it forms but one aspect of an integrated regulatory framework which takes a holistic approach to the new converged environment.

This second aspect is particularly relevant in smaller economies where a converged regulatory approach might reduce the burden on government of maintaining different legal frameworks and simplify the work of regulatory bodies. In addition it would address the fact that the Internet is rendering traditional regulation no longer fit for purpose. For example, as broadband becomes more available the sort of issues that telecoms operators faced with so called “OTT voice” will be faced by broadcasters from “OTT video”. But policy makers will be also faced with a challenge as OTT video providers will not have the same “must carry” obligations in respect of local content and channels. These existing rules on broadcasting will simply be no longer able to deliver the policy objectives that they were designed to. The blanket approach to Net Neutrality actually reinforces this regulatory obsolescence and may sidestep any policy objectives of Governments in the region.



“ If Net Neutrality is bad policy in a developed economy, it is nothing less than outrageous in a developing one, which has yet incipient networks and a lot of rural areas to be covered. Net Neutrality rules obliterate the incentives to innovate and expand networks. ”

- Forbes



Why it's important

The situation in regions like the US and Europe has changed dramatically over the past decade. As recently as 2000 there were just under 150 million dial-up subscriptions in the 34 OECD countries and fewer than 20 million broadband subscriptions. Now the vast majority in those countries have high quality Internet access if they want it and subscribe to the service because they see the value and can afford it.

The situation in the Caribbean is quite different as fixed broadband penetration rates are generally still low. Mobile voice penetration is quite high but even though

there is good 3G coverage in general take up of data services isn't keeping up. In fact it is Digicel's experience that even when people have handsets they either cannot afford or cannot see the benefit in purchasing enough data to last them a month.

The issues of Net Neutrality that concern global Internet content providers are largely irrelevant to the unconnected consumers in the Caribbean. The Internet and its use needs to be of value to them before they will come into the on-line community.

Today, telecommunications operators in the Caribbean region have the freedom to enter into commercial discussions with these global Internet companies. There is no reason to change this. In fact such arrangements will enable operators to invest more money in broadband networks and to build better networks for the future.

A significant concern is that Net Neutrality rules will restrict operators commercially and this will deter investment in broadband networks. Restrictive Net Neutrality rules would also prevent operators from running their networks efficiently and increase costs which in turn would be passed on to consumers.

Getting the policy objectives and regulatory framework wrong means that the digital divide between the economies and societies of the Caribbean and their more powerful and more developed trading partners will grow. Worse yet the Caribbean may fall behind other regions who are competing to do business with the big trading blocks. If you don't have Internet connectivity in the first place you cannot participate in the global digital economy.



What's happened elsewhere?

In the wake of the introduction in the US of restrictive Net Neutrality rules by the FCC in April 2015 there are on-going debates as to how this should be applied in practice. The restrictive approach is not without its critics in the US either. The legality of the FCC decision

has been challenged before the courts and the FCC itself is divided. One FCC Commissioner, Mr. Ajit Pai, is quoted as saying that Net Neutrality is “a solution that won't work to a problem that simply doesn't exist.”

“ A solution that won't work to a problem that simply doesn't exist ”

- Mr. Ajit Pai, FCC Commissioner

In the EU a significant consideration which is emerging is the fact that the commercial giants of the Internet are US companies which means that much of the financial benefit of EU citizens being on line actually leaves the local digital economy in Europe.

It is important to note that the big drivers of data usage are not regionally based. Facebook and YouTube alone drive nearly 40% of the network data capacity requirements of US mobile operators.

Ofcom in the UK has acknowledged that ISPs might in future wish to offer guaranteed service levels to content providers in exchange for increased fees. In turn this could lead to differentiation of offers and promote investment in higher-speed access networks. restrictive Net Neutrality regulation might prevent this sort of innovation. Australia has adopted a 'wait and see' approach.

The European Union is suggesting that prioritised access might be acceptable for “specialized services”. As a result it is preparing to allow Internet providers to run ‘two-speed’ data services, in a sharp contrast to the approach in the FCC rules.

The idea that the Internet should allow for the free access to ideas is supported by Digicel in a practical way through its “zero rating” of access to Wikipedia. A strict application of Net Neutrality rules would prohibit this initiative to extend the benefits of the Internet as widely as possible.

For developing countries any disincentives to operator investment would have serious consequences. A recent article in Forbes magazine noted that “If Net Neutrality is bad policy in a developed economy, it is nothing less than outrageous in a developing one, which has yet incipient networks and a lot of rural areas to be covered. Net Neutrality rules obliterate the incentives to innovate and expand networks.”



How to move forward

Perhaps the first, best and easiest thing to do is to pause and take stock.

Net Neutrality discussions in the US, the EU and elsewhere have been high profile and there might appear to be an urgency for regulators and policy makers in other regions to do something or risk being left behind. This isn't the case. The fact that there is such debate going on, even in economies that have been considering this for some time is an indication that the matter is far from straightforward and no one has started to gain an advantage. In fact, the Caribbean region has much to gain by adopting a more considered approach as there is time to see where the various debates lead and to analyse the specific policy goals and challenges Caribbean markets face.

Any intervention will have long term effects. The extra time taken now to craft the best possible approach will be repaid many times over compared to a sooner but less appropriate (and perhaps even damaging) decision.

Next, policy and law makers in the region need to decide if they are going to use this opportunity to leapfrog from playing policy catch up to best in class policy leadership. This can happen if a converged and coherent approach

is taken to regulation which mirrors the converged environment that we are evolving into. Then they need to figure out what are the actual policy goals that they want this framework to deliver. Until they do this they can't begin to design a framework which will produce the desired results.

It is Digicel's view that the priority in the Caribbean should be setting policies that encourage the unconnected to become connected. Significant parts of policies will almost certainly have to be implemented by those who do the connecting – the network operators. In addition Government will have a role in ensuring that there is a sufficient pool of relevant and local on-line services to encourage citizens to move from the physical world to the virtual one. These are the complementary supply side and demand sides of the equation and require a partnership to get the most out of the individual efforts.

Regulators and law makers should be wary of simply adopting a policy response based on the US model. This is essentially a US solution to address issues specific to the US market. It imposes a single commercial and

technical model on one part of the Internet ecosystem. It is designed for a market with high levels of high speed fixed Internet, high levels of mobile Internet access and high levels of consumer use of Internet services and also where the major Internet content providers are based.

The investment required to build out the broadband networks of the future runs into billions of dollars. Restrictive Net Neutrality rules undermine the ability of operators to make these investments and far from protecting the interests of end users they undermine them.

A more sophisticated response is required in the Caribbean - one which intervenes no more than it needs to and allows sufficient flexibility for the markets to respond to the changing supply of services and the demands of consumers.

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Massachusetts Institute of Technology Media Lab
and Founder of One Laptop Per Child Association



About Digicel

Digicel is a leading global communications provider with operations in 32 markets in the Caribbean, Central America and Asia Pacific. After more than 14 years of operation, total investment to date stands at over US\$5 billion worldwide. The company is renowned for delivering best value, best service and best network.

Digicel is the lead sponsor of Caribbean, Central American and Pacific sports teams, including the Special Olympics teams throughout these regions. Digicel sponsors the West Indies cricket team and is also the title sponsor of the Caribbean Premier League. In the Pacific, Digicel is the proud sponsor of several national rugby teams and also sponsors the Vanuatu cricket team.

Digicel also runs a host of community-based initiatives across its markets and has set up Digicel Foundations in Haiti, Jamaica, Papua New Guinea and Trinidad and Tobago which focus on educational, cultural and social development programmes.

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