

REPORT – PUBLIC CONSULTATIONS AND HEARINGS

TELECOMMUNICATIONS REGULATORY COMMISSION VIRGIN ISLANDS

TELECOMMUNICATIONS CODE (PART 2) (INTERNET TRAFFIC EXCHANGE) REQUIREMENTS, 2010

REPORT ON THE CONSULTATION

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1. Introduction

On 8th June 2010 the Telecommunications Regulatory Commission of the Virgin Islands (“TRC”) published for public consultation (the “Consultation”) its draft Internet Traffic Exchange document (the “Document”). The purpose of this document (the “Report”) is to explain the outcomes of the Consultation. The final Document is published separately.

In the draft Document the TRC mandates that locally originated Internet traffic destined for local users must not be routed abroad unless exceptional circumstances prevent it. It defines the obligations of public suppliers and states how the local Internet Exchange Point (the “IXP”) should be established and operated. Additionally, the Document specifies how the costs of establishing and operating the IXP should be covered, outlines the TRC’s rights in the event of force majeure and sets forth the conditions under which a public supplier shall comply with the requirements of the Document. Finally, the Document points out the conditions under which a public supplier shall commit an offence.

2. Responses

During the consultation period, the TRC received a single response which was submitted by the public supplier Cable and Wireless (BVI) Limited (“LIME”). LIME generally agrees that an IXP has the potential to deliver benefits outlined by the TRC in its consultation document. In its response LIME made the following points (TRC’s views on LIME’s input are provided next to a summary of each point:

i) Scope of the IXP

a) LIME LIME agrees with the definition and scope. It states that allowing transit traffic to be exchanged via the IXP would be unusual and would significantly increase the scale, scope and cost of the IXP, and render it prohibitively expensive.

TRC The Document’s scope excludes transit of traffic.

b) LIME LIME noted that under the conditions of section 5 (1) “Obligations of public suppliers”, a supplier could not re-route its Internet traffic in the event of any failure that was not related to force majeure. Additionally, the process defined under force majeure introduces potential delays in re-routing local Internet traffic. LIME’s suggestion is to use the IXP as the preferred route for local-to-local Internet traffic

TRC The TRC is in agreement that the force majeure stipulation by itself is too stringent and could cause delays in restoring service in the event of some failures but considers that including the term “preferred route” could create a too broad exemption. The TRC will add an “Failures affecting routing of traffic” section that will allow suppliers to use alternate routing in the event of non-force majeure failures without requiring permission

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from the TRC.

ii) Definition of Participants

a) LIME LIME’s view is that the members of the IXP should be public suppliers of Internet service, consistent with the approach taken by some IXPs. A key technical requirement of an IXP is that the ISPs connecting to it must run BGP on their networks. This means that only those ISPs with their own Autonomous System (“AS”) number and at least a /24 network can connect to the IXP.

TRC The Document stipulates in section 6 (2) that “Public suppliers shall devise a mutually agreed method of governance and rules under which the Facility shall operate.” The Document further states in section 6 (3) that “[t]he Facility shall be operated in a manner that is fair, reasonable and non-discriminatory to all and must be open to all interested parties, including persons that are not public suppliers that meet fair, reasonable and non-discriminatory minimum requirements for participation.” The TRC remains of the opinion that there should not be any a priori restriction for the parties other than public suppliers to connect to the IXP. The ability for such parties to connect could have a potential for enhancing the value of the IXP and providing additional services to the participants in the IXP. However it is left to participating public suppliers to determine the technical conditions (provided they are fair, reasonable and non-discriminatory) applicable to anyone who can connect to the IXP. Such technical conditions as well as the exclusion of transit traffic from the scope of the IXP will naturally limit the number of parties that could connect to the IXP and benefit from such connection.

iii) Time Frame for Implementation

a) LIME LIME states that the Commission has provided no basis for its time frame of one (1) month subsequent to the effective date of the Document for the IXP to be operational. It further asserts that the Commission has not attempted to evaluate how long the requirements it has stated will take to be fulfilled.

TRC The Consultation Cover that was issued in tandem with the Document stated “[m]uch of the work surrounding the technical design and rules of operation has been completed and the working group is committed towards an end of June launch date. Because so much of the work has already been completed and the proximity of the completion date, this document is up for public consultation for only two weeks instead of the usual four weeks allowed for consultation and completion of implementation requires only one month.” The working group, which

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included representatives from LIME, selected and agreed a site for the IXP, prepared a draft Memorandum of Understanding (“MOU”) and in principle agreed on technical requirements. This working was established in _____. The equipment required for the initial implementation has been procured. Participants need only complete and sign the MOU, exchange addressing information required for programming routers and physically install the equipment and link to the site.

iv) Requirements for Charge-Free Exchange of Traffic

a) LIME LIME submits that TRC has confused the purpose of an IXP (to facilitate the exchange of Internet traffic) with a particular charging model. It may be that the ISPs choose to adopt a charge-free exchange of traffic, but this is an issue that should properly be left to the parties to agree. LIME also suggests that “[w]here there is a traffic imbalance, that is one Internet provider sends far more traffic to the network of another provider, then operators usually charge each other, or charge for the net difference”.

TRC Exchange of traffic between different internet service providers is normally done under one of the two models: peering or transit. Transit services enable an internet service provider to send its traffic to the global Internet. Peering allows exchange of traffic between networks of two providers. Whereas providers usually pay for transit services, peering is normally provided without a charge.

LIME proposed model for settlement for traffic imbalances is impractical for the Internet. Contrary to voice telephony, direction of traffic flows in the Internet does not necessary represent flows of value creation - e.g. end-users normally receive more traffic than they send, whereas content providers experience opposite traffic flows, but essentially it is the interaction of both such parties that make the Internet useful. In the context above, as the scope of the Document excludes transit, the TRC considers it reasonable to include the principle of exchanging traffic on the “charge-free” basis in the Document. This will also eliminate a potential source of disagreements between participants.

b) LIME LIME also lists several recommended requirements for peering.

TRC These are all requirements that the TRC considers it is best for the participants of the IXP to agree and define in the rules of operation of the IXP (section 6 (2)).

v) Common Cost

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a) **LIME** LIME does not disagree that at least some of the common operating capital costs should be borne by those connected to the IXP and that each operator should bear its own cost, including the cost to access the IXP. However LIME submits that the previous offer of the Government to provide a neutral location for the IXP, including any necessary power and environmental requirements, was reasonable and appropriate, and would facilitate the implementation of the IXP. LIME is also of the position that it would also be appropriate for the public to share the capital cost of the IXP as well.

TRC It should be noted that the majority of common capital costs of the IXP have already been covered: the site was offered at no cost by the Government while the router and switch were donated by non-participants. Participants need only cover the cost of installing their links to the IXP. Therefore LIME’s suggestions with regard to financing of the IXP have generally been met. The general provisions of the Document ensure that the framework is set for continuous operation of the IXP. The TRC however agrees to make an adjustment to the Document, explicitly allowing for the possibility for costs to be covered by other means (including public contributions or unilateral contributions from individual participants).

vi) Technical Solution

a) **LIME** LIME states “It is important to have the right technical solution for the IXP to function effectively. LIME is currently assessing this matter. However, as noted earlier, the [Internet Service Providers] in the Virgin Islands have not yet agreed on the appropriate technical solution for an IXP in the BVI.”

TRC The currently active members of the IXP working group (which until recently included LIME; LIME is welcome to re-establish its participation at any time) are working towards a Layer II solution utilizing a route-server. As indicated in (v) above, the equipment to achieve this has already been acquired.

3. Final measure

After reviewing the Document and the responses from Consultation, the TRC has decided to make the following modifications to the Document:

- i) In agreement with LIME’s point i(b), the TRC will add a section to the Document to allow suppliers to use alternate routes for local-to-local Internet traffic in the event of non-force majeure failures without seeking permission from the TRC;

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- ii) In accordance with point v(a), the TRC will clarify that sharing of costs of the IXP applies only when such costs are not covered by other means.

The TRC does not consider that an additional consultation on the amendments above is needed.