TELECOMMUNICATIONS REGULATORY COMMISSION

VIRGIN ISLANDS

REPORT ON THE CONSULTATION ON THE MARKET ANALYSIS OF INTERNATIONAL CONNECTIVITY

26 September 2013

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Report on Consultation

The consultation on the Market Analysis of International Connectivity and the Draft Determination of Dominance for the Provision of International Connectivity Services was launched by the Telecommunications Regulatory Commission ("the TRC") on 13 December 2012 and closed on 18 January 2013. Responses were received from:

- BVI Cable TV
- Cable and Wireless (BVI) Limited ("LIME BVI")
- CCT
- A stakeholder[1]

The Market Analysis was structured in three parts:

1. Definition of the relevant markets which were set out as:
    - The market for international connectivity services provided via IPLC's
    - The market for international managed data services ("IMDS") including multi-protocol label switching ("MPLS")
2. Assessment of competition and evidence of significant market power which proposed to designate LIME BVI as dominant as follows:
    - LIME BVI as dominant in the market for the provision of IPLCs in the VI
    - LIME BVI as dominant in the market for the provision of IMDS in the VI
3. Assessment of appropriate regulatory obligations which recommended regulating the price of IPLC's and MPLS at LIME BVI's cost of self-provision.

This Report sets out the response of each stakeholder to each question posed in the consultation document and then provides a conclusive view from the TRC taking into account the views of all the stakeholders.

A note on International Best Practice

Competitively priced wholesale international bandwidth and transparent and non-discriminatory access to this bandwidth is essential for the development of an ICT-centred society. Since the 1990's international organisations such as the ITU, EU and GATS have been proactive in promoting the concept of open access. Countries such as Singapore, India and Mauritius provide insightful examples of how international connectivity can be opened up to competitive principles even where the infrastructure retains bottleneck features. The consultation document set out how countries with competition or regulation of international connectivity have lower international call prices.

India has a very dynamic ICT sector and through outsourcing and the promotion of very cheap communications services has demonstrated its ability to use ICT to increase the overall country's wealth. India employed a two stage approach to regulating landing station and international capacity. Firstly, the

[1] The respondent is not a licensed public supplier and wishes to remain unnamed for the purposes of this consultation.

telecommunications regulator, the TRAI regulated the price of IPLC's (for E1, DS-3 and STM-1) in 2005. Then in 2007, the TRAI introduced a regulation on access to essential facilities at cable landing stations. This regulation set out that any operator owning a cable landing station on Indian territory must present a reference offer for approval by the TRAI including the terms and conditions of access to installations as well as the terms of colocation in these stations. The result of the regulations is that new service providers have access to international capacity on the same terms as consortium members and physical access to the landing station is not unduly delayed for operators wanting to connect to it.

In Mauritius, the telecoms regulator, ICTA, introduced price regulation of IPLCs in 2006 and an open access policy for cable landing stations in Mauritius in 2010. ICTA then implemented a reference cross connection offer model at submarine cable landing stations providing other licensed international long distance operators and networking services providers with the opportunity to become capacity owners on existing undersea cable systems and to get access to the landing stations of Mauritius Telecom while at the same time choosing backhaul services from any other licensed access providers.

In this way, the TRC follows the regulatory approach used in India and Mauritius to create greater competition in international telecommunication services with the end goal of achieving lower priced higher quality telecommunication services.

Consultation Questions

1. Are there other managed data services that should be included in the IMDS market?

The TRC adopted the following definition for IMDS based on the Singapore IDA's lead: "The IMDS market consists of packet-based services that provide managed connectivity between multiple customer sites, at least one of which is located outside of the VI." The TRC noted that the main IMDS product that is available in the VI is MPLS. The TRC suggested that Dedicated Internet Access ("DIA") should not form part of the market analysis.

Operator responses

BVI Cable TV

BVI Cable TV agreed that the definition of IMDS captured the vast majority of the market.

CCT

CCT stated that there were not any other managed data services that should be included in the IMDS market.

LIME BVI

LIME BVI stated that IMDS should include ATM, DIA, Frame Relay, IP-VPN, MPLS and other similar type services.

A Stakeholder

A Stakeholder had no comment on this question.

TRC Conclusion

The TRC is not convinced that the market for IMDS including MPLS should be widened to include other products such as DIA because such products can better be described as wholesale broadband products and may be examined under the forthcoming broadband market analysis. MPLS may be a substitute for DIA but DIA is not a complete substitute for MPLS as it does not provide the same level of connectivity and bandwidth between office locations in different countries.

2. Do you agree that IPLC and IMDS (including MPLS) are the relevant markets to analyse? Should any other markets be included in the analysis?

The TRC sets out the relevant markets as IPLC and IMDS based upon the Singapore IDA's designation and the range of services available in the VI.

BVI Cable TV

BVI Cable TV suggested that international connectivity via microwave transmission could be included in the Market Analysis given the short distance and link to the US Virgin Islands and Puerto Rico.

CCT

CCT agreed that IPLC and IMDS are the relevant markets to analyse and that no other markets should be included in the analysis.

LIME BVI

After acknowledging that the product market definition for IPLC may be acceptable, LIME BVI argued in their response that they considered it inappropriate to define the product market narrowly, limiting it to locally owned international voice and data capacity.

A Stakeholder

A Stakeholder had no comment on this question.

TRC Position

The TRC had considered the inclusion of microwave links in the Market Analysis but concluded that the technical limitations to microwave links meant that they cannot be viewed as a real substitute to submarine cables. The equipment is susceptible to damage and misalignment during storms. Microwave links can be used as a form of international communication which is complementary to submarine cables but due to the lack of 100% reliability in a hurricane zone, in a region such as that in which the VI and the US Virgin Islands are located, cannot be deemed a pure substitute. Therefore, whilst the TRC considers that it is possible to use microwave links to facilitate international connectivity over short distances, for the reasons outlined above, the TRC does not agree that it should be included as part of the market subject to review by the Market Analysis.

LIME BVI's objection to the scope of the IPLC product market within the VI neglects the fact that there is one locally licensed public supplier who has ownership in all four submarine cables. As pointed out by LIME BVI, the remaining shares in the submarine cables are owned by overseas operators. What is relevant here is that the submarine cables land on VI territory and the TRC has the jurisdiction to regulate services provided in the VI. Any service sold to a VI public supplier which uses a submarine cable which landed on VI territory would therefore be subject to VI regulation. Therefore, the TRC does not accept any suggestion by LIME BVI that the Market Analysis should be expanded to include providers offering capacity other than those (in this case, there is only one such person) licensed to provide such services in the VI.

In the IPLC market, the TRC proposes to regulate the price of the following products on a monthly rental basis: E1, DS3, STM1 and STM4.

In the IMDS market, the TRC proposes to regulate the price of MPLS on a monthly rental basis.

3. Do you agree that LIME BVI is dominant in the market for the provision of IPLCs? If not please explain why?

The consultation document presents an assessment of market power in the market for IPLCs. The analysis shows that LIME BVI is the only VI public supplier of IPLCs and controls the landing stations in the BVI and therefore LIME BVI is dominant in the provision of IPLCs.

BVI Cable TV

BVI Cable TV found that based on the definitions provided and the market data presented in the consultation document, it appeared that LIME BVI has a dominant position in the market for the provision of IPLCs.

LIME BVI.

LIME BVI suggests that "the TRC has mistakenly presumed that the market for IPLCs is a monopoly market presided over by LIME BVI". LIME BVI states that the TRC considers the public suppliers in the relevant IPLC market are LIME BVI, BVI Cable TV and CCT. LIME BVI suggests that all the holders of capacity rights in the submarine cables are also part of the market for IPLCs as VI public suppliers can purchase international bandwidth from other members of the consortia. LIME BVI states that it does not have the ability to charge high rates to its wholesale or retail customers in the VI without reference to the prices set by the other consortium members. LIME BVI states that because it owns a small percentage of the capacity on the cable systems it cannot be dominant.

A Stakeholder

A Stakeholder stated that, it believed that, based on the definitions provided and market data presented in the consultation document, LIME BVI has a dominant position in this market. A Stakeholder also stated that it would be valuable to know the market shares in the mobile market to understand if what appears to be LIME BVI's dominant position in the IPLC market does have an impact on the competitiveness of the mobile retail market.

TRC conclusion

It is unclear to the TRC why LIME would suggest that the TRC has included BVI Cable TV and CCT as suppliers in the relevant IPLC market, which if they were, would suggest that LIME BVI does not have a monopoly in the market. As stated by LIME BVI, it is possible for a VI public supplier to purchase international bandwidth from another member of the consortium other than LIME BVI. However, this relationship is between a VI public supplier and an external entity which does not provide any retail operations in the VI. In this case, LIME BVI retains its advantage whereby its self-supplies IPLCs and can offer wholesale and retail services which use IPLCs at a lower cost. In a competitive market this lower cost should translate into lower prices for customers but in the presence of market power will translate into a greater margin for LIME BVI.

The fact that LIME BVI may only own a small percentage of the capacity on the cable systems does not detract from LIME BVI's market power in selling and using the international capacity. LIME BVI is essentially the upstream provider of wholesale international capacity and the downstream provider of retail services which use that international capacity. Other members of the consortium are upstream providers only, none are downstream providers in the VI market. Therefore LIME BVI is alone and therefore dominant in being able to supply both wholesale and retail international capacity services in the VI. As alluded to by A Stakeholder, this has can have an effect on the competitiveness of related retail markets.

4. Do you agree that LIME BVI is dominant in the market for the provision of IMDS? If not, please explain why.

The TRC set out an assessment of LIME BVI's market power in the market for IMDS including the supply of MPLS concluding that LIME BVI is dominant.

BVI Cable TV

BVI Cable TV concurred that the definitions and data presented in the consultation document do support LIME having a dominant market position for IMDS services.

CCT

CCT agrees that LIME BVI is dominant in the market for the provision of IMDS.

LIME BVI

LIME BVI disagrees that it is dominant in the market for IMDS because LIME BVI argues there are effective competitors in the IMDS market. LIME BVI states "Among the large number of entities that have IRUs[2] on the cables there is no barrier to entry into the IMDS market." Thus LIME BVI is of the opinion that if it sells capacity in the form of IPLCs to other public suppliers in the BVI, then those other public suppliers can use that capacity to supply IMDS to the VI market.

A Stakeholder

A Stakeholder agreed that LIME BVI is dominant in the market for the provision of IMDS.

TRC Conclusion

The TRC agrees with LIME BVI that these other public suppliers in the VI could purchase IPLC's and offer IMDS for sale in principle but that they would not be able to compete effectively with LIME BVI, because LIME BVI self-supplies the input at a lower cost and therefore can always supply IMDS at a lower cost and retail price. In addition, LIME BVI's control of the cable landing facilities may also limit the degree to which another VI public supplier could effectively compete. LIME BVI suggests that the price of IMDS is falling but does not explain what is driving this and suggests that this is evidence that LIME BVI cannot behave independently of its competitors. It is possible that the price reduction could be driven by a reduction in LIME pricing of IMDS across the Caribbean or to avoid the imposition of price regulation.

5. Do you agree that the opportunity cost is zero? If not, please explain why.

The consultation document set out the TRC's view that the opportunity cost of LIME BVI using the cables to serve its own customers is zero. Due to the large amount of lit capacity (34Gbps) compared to domestic demand for capacity, the opportunity cost of VI-licensed operators using the cables for their own communications is zero as such use does not detract from the availability of capacity on the cables for international transit.

BVI Cable TV

BVI Cable TV responded that based on the information presented there would be no opportunity cost to LIME for carrying all BVI initiated traffic.

CCT

CCT agreed that the opportunity cost is zero.

LIME BVI

LIME did not agree that the opportunity cost is zero. LIME BVI stated that the opportunity cost of LIME BVI's use of the international cable is low. LIME BVI argue that LIME BVI's requirements for international traffic were taken into account when planning each cable and therefore the use of the cable for LIME

[2] Indefeasible rights of use

BVI purposes is planned and not incidental. LIME BVI also argue that other consortium members and IRU holders can compete with LIME BVI in both the wholesale and retail markets in the VI which presents business risks for LIME BVI.

A Stakeholder

A Stakeholder agreed that the opportunity cost is zero.

TRC Conclusion

The TRC accepts that LIME BVI's requirements for international traffic were taken into account when planning the cable. However, the TRC believes that the opportunity cost would only be positive if the use of the cables by operators in the VI somehow limited external use of the cable. In the face of spare capacity, this is unlikely. The TRC does not see how use of the cables by other consortium members and IRU holders would affect the opportunity cost of use of the cable by operators in the VI as each member will have a set amount of capacity with spare capacity remaining. The TRC is willing to accept that the opportunity cost of the use of the cable by operators in the VI may be positive but maintains that it is very small and is not such as to warrant a modification of the TRC's approach to the assessment of LIME's access costs.

6. Do you agree that the investment cost of VI use of the submarine cables is zero? If not, please explain why.

The consultation document sets out that the cables were originally built for international transit and not for use by the local market and that given the size of the VI market it would be inefficient to attempt to recover the costs of investment from VI use of the cables.

BVI Cable TV

BVI Cable TV stated that they believed the investment cost for handling BVI traffic is zero or near zero.

CCT

CCT agreed that the investment cost of use of the submarine cables by operators in the VI is zero.

LIME BVI

LIME BVI did not agree that the investment cost of VI use of the submarine cable is zero. LIME BVI stated that the investment cost of a submarine cable used in the VI is small relative to the total investment in the entire cable but given the size of LIME BVI's business is still material. LIME BVI argued that they should therefore be able to recover this portion of the investment plus a reasonable return via the IPLC and IMDS rate. LIME BVI also made the point that the annual operating and maintenance costs incurred in using the cables to supply IPLC and IMDS services in the VI are material.

A Stakeholder

A Stakeholder agreed that the investment cost of VI use of the submarine cables is zero.

TRC Conclusion

LIME BVI argued that they should be able to recover the investment cost of the cable due to VI use via the IPLC and IMDS rates. As stated in the consultation document, the TRC believes that the submarine cables were primarily built for regional traffic not purposefully for VI traffic. Therefore, it is efficient to recover the investment costs from non-VI use. However, as set out in the following question, the TRC believes that marginal cost pricing is the appropriate way to price IPLCs and IMDS for VI use and to the extent that investment cost constitutes part of marginal cost then it should be included. If a model were built to calculate the marginal cost or the long run incremental cost of use of the cables by the local market, then it would incorporate the weighted average cost of capital which would take account of the investment cost relevant to the portion of the cables employed for use by operators in the VI. In the absence of a costing model, the TRC is of the view that the internal price that LIME BVI pays for use of the cables represents the best proxy for marginal cost.

7. Do you agree that the marginal cost of VI use of the submarine cables is positive?

All the respondents agreed that the marginal cost is positive. BVI Cable TV added that there will always be some marginal cost for provisioning new operators or capacity on the submarine cables but that these marginal costs are likely to be quite low.

The TRC is of the view that marginal cost pricing is the appropriate pricing approach for VI use of the cables. The incremental cost of LIME BVI using the cables should equate to the internal price that LIME BVI pays to C&W Communications for use of the cable. To ensure a level playing field, all operators should pay the same marginal cost relative to the amount of bandwidth purchased to use the cable.

8. Do you agree with the principle that LIME BVI should sell IPLCs and IMDS at the cost of self-provision i.e. the same price which is charges to itself? If not please explain why.

BVI Cable TV

BVI Cable TV suggested that the costs that LIME books when providing these services to its own affiliates may or may not reflect true market costs. BVI Cable TV recommended that actual cost data be provided to confirm the true cost based pricing. In the absence of cost information, BVI Cable TV agreed that LIME BVI's price should be set at the cost of self-provision.

CCT

CCT agreed that LIME BVI should sell IPLCs and IMDS at the cost of self-provision.

LIME BVI

LIME BVI did not agree that the price at which it sells IPLCs and IMDS should be regulated as it is not dominant in these markets. LIME BVI suggest that the market should continue to be the determinant of the prices at which IPLC's and IMDS are sold to VI public suppliers.

Stakeholder

A Stakeholder set out a number of reasons why they do not agree with the principle. Given the number of reasons and the set of questions raised, these reasons are set out in the table below with the TRC's response.

Stakeholder comment	**TRC Response**
1. The timeframe required for the entire process to play out may be years during which time the industry will remain status quo. No internal companies will invest in infrastructure, no companies will enter the BVI market and no investment will enter existing or potentially new entrants.	If the proposed licence amendment goes ahead, regulated IPLC and IMDS prices could be in place within four months of commencing the process. The TRC does not see time delay as a reason not to regulate a market.
2. No one knows what the inevitable cost LIME will sell their products for after implementation.	The TRC has confidential information from LIME BVI concerning the cost of self-provision which the TRC wishes to use to set the regulated price.
3. Once the TRC's plan is implemented a base price will be set. Theoretically no company will be allowed to sell for less than this as it will be deemed anticompetitive by the TRC's own rules.	If a VI competitor wished to sell international connectivity services at a price below the regulated price then the TRC would request to see cost information which demonstrated that such pricing was not below cost. If not then the TRC would be highly supportive of such competitive pricing. In accordance with this sentiment, the wording of the proposed Annex 9 of the Licence Amendment which sets out the regulated rates would be changed to set the rates as a maximum allowing for lower prices. However, the TRC is of the view that it is highly unlikely that any competitor would be able to offer services below the cost of LIME BVI self-provision.
4. By following this path the TRC eliminates real competition by creating an artificial competition.	In the absence of competition, a regulated outcome should mimic a competitive outcome. At the time of consultation there are no licensed competitors in the VI. A competitive outcome would entail cost-based pricing, which the TRC is seeking to impose by the proposed licence amendment.
5. Real competition is driven by the marketplace and not by artificial involvement by regulatory bodies.	The TRC would not seek to stifle competition through regulation and as per Section 26 of the Telecommunications Act, 2006, if a position of determined dominance were to change, then the TRC shall remove the appropriate regulations.
6. By allowing a separate carrier controlling separate pipe and bandwidth to compete	Whilst the TRC is not yet convinced of the economic case for building another submarine

Stakeholder comment	TRC Response
head on with LIME a more favourable long-term landscape develops as it opens up the market. TRC action would further compartmentalize the BVI inside of a bubble of its own creation.	cable for VI use, the TRC would encourage a separate carrier controlling a separate pipe to compete with LIME BVI and would seek adequate justification for the proposed pipe in the usual way. The proposed regulation will only apply to designated dominant public suppliers in the relevant market i.e. to LIME BVI. However, the TRC recognizes that whilst any other operator who might enter the market would not be bound by this regulated rate, it would necessarily have to set rates that are no higher than the regulated rate in order to compete effectively.
7. LIME remains in control of all BVI subsea cable as the Stakeholder will be forced to wait for investors to be satisfied with the outcome of this process.	The TRC believes that any investment in the telecommunications sector carries a certain degree of regulatory risk, which regulators seek to reduce as far as is reasonably possible. In this case, if, upon completion of this process, the TRC manages to declare an operator dominant in the IPLC and IMDS markets in the VI and to impose regulated rates on that operator, A Stakeholder and its potential investors would then have the certainty, provided that the market does not change, that the rates of access would be no more than the regulated rates for such period of time as the regulator considers appropriate. When such rates are established, the TRC may only remove this regulatory restriction if there is good reason to believe that the market has changed and the operator declared dominant is no longer dominant. Then the TRC can only do so in accordance with a process set out in the Act and subject to public consultation. Therefore, the TRC believes that whilst A Stakeholder must, in fact, wait until the due completion of this process of rate regulation as prescribed by the Telecommunications Act, 2006, should there be no good reason why the TRC should not regulate the rates of access to IPLC's and IMDS as proposed, the outcome would serve to increase the degree of competitiveness in the relevant markets, including new entrants.
8. CCT and BVI Cable TV will need major investments into their infrastructure to be able to offer the services suggested. There is no guarantee this will be forthcoming. There is danger of one of these companies	The TRC is not suggesting that other public suppliers such as CCT and BVI Cable TV would start selling international connectivity services although the TRC welcomes further competition in this area. The TRC's concern is that currently there is one

Stakeholder comment	TRC Response
going out of business. If a duopoly develops ensuring true competition will be difficult in the longer term as the market tends to be partitioned.	licensed public supplier in the VI who has preferential access to the submarine cables because it has smaller ownership of the cable and is an affiliate of the owner of a largest total share of all the cables. If a new entrant to the market is able to build a new submarine cable, then the TRC is supportive of that in principle, subject to planning regulations. But as explained in the consultation document, the economics of submarine cables do not blend well with the diseconomies of scale experienced in small islands when the purpose of the submarine cable is to service only demand on the small island. Rather, the intention of the proposed regulation is to ensure that the operator determined dominant in the market for IPLC's and IMDS charge rates that are no higher than the regulated rates to persons who wish to access the existing IPLC's or to offer IMDS to the VI public.
9. Disaster preparedness is not improved, as all cables remain controlled by one company.	LIME BVI is required to coordinate with the TRC and the Department of Disaster Management to keep communications running where possible. Any other operator of similar cables would be required to comply with the same procedures.
10. The Stakeholder will sign an agreement with a consortium member to access bandwidth from a submarine cable. This creates true competition that the TRC could create ex-ante regulations to ensure LIME does not create anticompetitive pricing to kill our entry.	The TRC is proposing to regulate the price of international bandwidth at cost, allowing LIME to recover all the relevant costs. This resulting price would not include a small premium. Therefore the TRC expects that the regulated price would be below any price that a new entrant might be required to pay to a third party from which it might choose to purchase capacity. Therefore, it stands to reason that a new entrant might be better off buying the capacity at the regulated price from LIME BVI. The regulated price will not apply to the rates that a third party might wish to charge if that third party is not a VI licensed public supplier and has not been declared dominant by the TRC. The regulated rates would only apply to LIME BVI's capacity which LIME BVI will be mandated to sell to new entrants in accordance with the Telecommunications Code.

TRC Conclusion

The TRC has set out that the recommended approach for pricing IPLCs and IMDS is according to marginal cost pricing principles. A new entrant such as a reseller offering broadband services, if it chooses not to invest in an additional submarine cable, should be able to access cheaper international bandwidth through regulated access prices. The fact that there is spare capacity on the existing submarine cables, added to the fact that LIME BVI plans to land further submarine cables to transit international traffic through the Caribbean, means that there is excess capacity, which although maybe unlit, is connected to the VI and therefore it is likely that the cost of "lighting" that capacity for VI use, if it were required, would be lower than the cost of installing further cables purely for VI use.

Each country has a need for international connectivity. By its very nature, an international connection will require a cable between at least two countries. It is unlikely that one country will own that cable. Let's imagine there are two countries A and B who both own 50% of the cable connecting them. In country A, there are three operators, X, Y and Z and operator X owns the 50%. In theory operators, Y and Z could purchase capacity from the capacity owner from country B but in order to access that capacity will have to go through operator X who owns the landing station in country A. Therefore, operator B of country B will have to negotiate access through operator X to offer capacity to operator Y. It follows that operator X will always be able to supply access from country A on more preferential terms than operator B. Operator B does not have the incentive to supply operator X with international connectivity because it cannot supply international connectivity from country A to operator X on cheaper terms than operator X can self-supply.

In the case of the VI, there is not just one cable and country A and country B, there are a variety of cable and terminating countries and owners on the cables. This should therefore enable the VI operator, with ownership of the cables to negotiate low landing fees for traffic at the other end of the cable, because there is a choice of routes and the need to land traffic is reciprocal. However, another VI public supplier buying capacity from a non VI supplier of international connectivity will not have that advantage. The VI public supplier is essentially faced with a demand bottleneck. All the demand for international connectivity from the VI comes from the VI even though the terminating connection may be anywhere in the world – the choice of terminating suppliers is greater than the supplier of originating suppliers. This is a key issue in international connectivity. International connectivity prices do not compare well across different parts of the world because they are serving different types of demand. The demand from the VI is small-scale compared to the demand for using the international cables for other purposes. Therefore demand pressure from the VI to use the cables is weak in terms of negotiating lower prices and therefore regulation is required to ensure that, in the face of a dominant public supplier, a fair price is offered to all VI public suppliers. The regulated rates will be applicable as price ceilings allowing for competitive pricing below the maximum in accordance with the principles of fair competition and cost-based pricing with reference to Part 6 of the Telecommunications Code: Requirements on Interconnection and Access to Facilities and Utility Installations 2011.

9. What is the appropriate price to charge for a) IPLCs and b) IMDS?

The TRC recommended that the appropriate price to charge for IPLCs and IMDS should be based on the cost of LIME BVI's self-provision.

BVI Cable TV

BVI Cable TV advocated the use of market based pricing whether for self- provisioning or to other service providers. BVI Cable TV argued that this pricing should reflect cost-based pricing to cover both the original asset cost (including an installation charge or set-up fee) and the operating costs to provide that specific capacity and that these prices should be available to all operators. BVI Cable TV suggested that if the cost data is not available, then LIME should provide IPLC and IMDS services to other public suppliers at its own costs of self- provisioning to create a competitive level playing field. BVI Cable TV reported, on a confidential basis, the prices charged for E1, DS-3, STM-1 and STM-4 in the US Virgin Islands.

CCT

CCT stated that the appropriate price to charge for both IPLC's and IMDS is LIME BVI's own costs of self-provision. CCT reported confidentially to the TRC information on the price of STM-1 pricing rather than pricing per E1.

LIME BVI

LIME BVI stated that the current market prices are appropriate for IPLC's and IMDS. LIME BVI argued that due to competition, LIME BVI has been forced to reduce its IMDS prices to remain competitive.

A Stakeholder

A Stakeholder provided no answer to this question stating that they did not have adequate information.

TRC Conclusion

The TRC remains unconvinced that the fact that LIME BVI pays a price which is below the prices it charges to the other public suppliers is evidence of a competitive market. The TRC believes that all public suppliers in the VI should pay the same price to access the international cables and that price should reflect the marginal cost of use. Therefore the appropriate price to charge is LIME BVI's cost of self-provision. In the event that LIME BVI's reported costs of self-provision do not reflect the marginal cost of use, the TRC shall propose regulated prices based on market prices elsewhere and on the falling trend in international connectivity prices.

Feedback from the operators has led the TRC to set out a charging structure for IPLC's which includes an installation cost or set-up fee and a monthly rental cost for DS3, STM1 and STM4 in addition to the E1 and MPLS pricing. The operators have reported that they may purchase international capacity in multiples of E1's which would then be subject to capacity discounts. In setting the regulated charges, the TRC has taken into account confidential information submitted by LIME BVI and the other licensed public suppliers concerning pricing available in the US Virgin Islands together with benchmarks from other regulated island states such as Mauritius where IPLC pricing has fallen by 65% since the introduction of price regulation in 2006.

10. Do you agree that mandatory access and co-location is necessary?

The consultation document set out that upon a determination of dominance the TRC shall impose access obligations upon a dominant supplier in line with the Telecommunications Code (Part 6) (Interconnection and Access to Facilities and Utility Installations) Requirements 2011.

BVI Cable TV
BVI Cable agreed that equal access to the submarine cables should be provided through mandatory access and colocation.

CCT
CCT agreed that mandatory access and co-location are necessary.

LIME BVI
LIME BVI did not consider that mandatory access and co-location are necessary. LIME BVI argue that the contracts in place to establish a submarine cable allow the consortium members to share access to the cable and/or landing sites. According to LIME BVI, these contracts allow all consortium members to sell capacity to VI public suppliers. LIME BVI state that investment in a submarine cable system is prefaced on the ability to sell capacity at a price that generates a return on that investment.

A Stakeholder
A Stakeholder stated that it would not make a difference whether they have colocation or access.

TRC Conclusion
Section 17 of the Telecommunications Code (Interconnection and Access to Facilities and Utility Installations) Requirements, 2011 requires *inter alia* that a public supplier shall provide other public suppliers with access to all facilities that it owns or controls on a timely basis, with such access not to be unreasonably withheld.

The responses received from persons during this consultation process do not disclose arguments that are so compelling as to convince the TRC that the Code should be amended to remove this requirement in relation to the provision of access to submarine cables.

11. What is your view on the likely consumer effects of the proposed regulation?

The consultation document outlined that the benefits of the regulation would be felt at two levels. At the operator level, whereby all public suppliers will be able to compete on the same basis as LIME BVI by obtaining access to international connectivity services at the same price. Then at the consumer level, lower prices for wholesale inputs should lead to lower prices for end services provided to consumers in a competitive market.

BVI Cable TV

BVI Cable TV suggested that lower wholesale rates would enable new service providers to enter the market and offer end user services enhancing competition in this area.

CCT

CCT argued that the proposed regulation would lower the "current extremely high wholesale international connectivity prices". CCT said that a reduction of wholesale prices would reduce the cost of providing the related retail services to customers, especially for internet services which would lead to higher internet penetration and usage.

LIME BVI

LIME BVI stated their opinion that the proposed regulation is not required and will not have any positive effects on consumers. LIME BVI suggest that the TRC's market analysis is methodologically flawed and the proposed regulations are "baseless". LIME BVI suggest that the regulations would only generate administrative costs and would remove LIME BVI's ability to respond to market forces.

LIME BVI suggest that the regulation could deter future investment in submarine cables in the VI and that the TRC should encourage a regulatory regime which encourages consortia to invest in landing cables in the BVI rather than Puerto Rico.

A Stakeholder

A Stakeholder suggested that as a result of the regulation, consumers would experience no difference for 2-3 years due to the time it might take to implement any regulation. A Stakeholder suggested that consumers would then be offered lower rates and would switch carrier. Without ex ante regulation, the incumbent would continue to have an advantage and without the introduction of competition, prices would continue to rise as service declined.

TRC Conclusion

If LIME BVI competes effectively with the other consortium members then LIME BVI would be offering international connectivity services at the same price to the other public suppliers in the BVI as it offers to itself, as the other consortium members who, as according to LIME have access on the same basis as LIME BVI, would also be able to offer those prices to the VI public suppliers. The key question is why can LIME BVI offer prices to itself that are lower than it offers to the other public suppliers and as offered by the other consortium members. If the other consortium members are able to offer the same price as LIME BVI charges to itself and compete effectively with LIME BVI in this market then the proposed price regulation will make no difference and will not have any negative effect on the market.

The TRC is not satisfied to allow LIME BVI to continue to supply itself at a lower price with a product which it has privileged access to. If LIME BVI were not part of an international telecommunications company then it would not have access to these cables on different terms to other public suppliers in the VI. The fact that C&W continues to build submarine cables which connect to the VI, with a population of 30,000 demonstrates that these cables are not built for VI use but are connected to the VI due to the strategic position in the Caribbean. LIME BVI does not outline the benefit to the VI of additional landing cables. If there were no submarine cables connected to the VI then it would make far more sense, if the cable was purely for VI use, that a consortium be set up of VI public suppliers who shared the set-up and operational costs of the cable. Instead, the VI faces a situation whereby one regional operator has invested and continues to invest in submarine cables which use the VI's strategic position for the good of their international business. One operator has an advantage which must be made available to all public suppliers, given the essential facility nature of the submarine cables, and the TRC sees fit to do this through regulation to ensure a level playing field amongst public suppliers. The TRC does not believe that it will take 2-3 years to achieve effective regulation as suggested by a Stakeholder. The Licence amendment process will take a minimum of four months but it is expected that regulated access prices would lead to a fall in the price of international services in the short as well as long term.

Conclusion and next steps

Upon consideration of the arguments set out in response to the Market Analysis and Draft Determination and based on the conclusions drawn by the TRC as set out above, the TRC now plans to designate LIME BVI as the public supplier dominant in the market for the provision of IPLCs and MPLS in the VI in accordance with section 26(3) of the Telecommunications Act, 2006 as follows:

LIME BVI is dominant in the market for the provision of IPLCs in the VI

LIME BVI is dominant in the market for the provision of IMDS in the VI

The TRC does not find that any of the arguments put forward in responses received by the public are so convincing to persuade the TRC that LIME BVI not dominant in these markets.

No comments were provided by any respondent on the Draft Determination of Dominance. The TRC will now proceed to publish the Determination of Dominance.

The TRC firmly believes that the appropriate path for the VI is to regulate the price of IPLCs and IMDS to ensure fair competition amongst public suppliers and, in so doing, to provide the opportunity for greater competition in the provision of downstream services. The TRC's only wish is to ensure that LIME BVI and the other licensed public suppliers can all access international connectivity services on the same terms and conditions so that no advantage is afforded to any one operator. The TRC does not seek to regulate LIME BVI's or Cable and Wireless Communications' international business and is clear that the regulation only applies to LIME BVI for the benefit of public suppliers licensed to provide services in the VI and purchasers of international bandwidth to enable international communication to and from the VI.

Based upon the marginal cost pricing principle, the TRC proposes that each public supplier should pay for international services at the cost of LIME BVI's self-provision. Once the determination of dominance has been issued, the TRC sees it fit to write to LIME BVI outlining the proposed regulated prices and

Licence Amendment. A thirty day period of negotiation with LIME BVI will then take place as outlined in Article 18 of the Licence. The Determination of Dominance and proposed amendment to the Licence of LIME BVI are appended to this Report.

Upon the expiration of the thirty (30) day period of negotiation or at such time that there is consensus between the TRC and the Licensee, whichever, is sooner, the TRC will publish in the Gazette and in one national newspaper a Notice of the Draft Directive on the proposed amendments to the terms of the Licence (including the regulated rates) and will notify each Licensee as provided in Article 18.5.

The Licensees or any interested party will then be permitted thirty (30) days to respond to this Notice outlining any further comments and objections to the proposed amendments. No earlier than ten (10) days after receipt of responses to the Notice of the Draft Directive, the TRC will then hold a Hearing on the matter to provide even further opportunity for comment.

Not less than sixty (60) days following the date of publication of the Notice, the TRC will consider the comments received both from the response to the Draft Notice and from the Hearing and will submit a report and opinion to the Licensees. No earlier than ninety days following the publication of the Notice the TRC will then publish its Directive as to the regulatory remedies to be implemented in the relevant markets and the specific amendments to the Licence of LIME BVI as considered necessary to give effect to such remedies.

A tabular representation of the above schedule is as follows:

Timeline	**Procedural Steps**
Date of this document	Publication of short report on second consultation
+ 30 days	Period of negotiation on Licence Amendment
Day 0	Publication of Notice of Licence Amendment *(upon expiration of 30-day period of negotiation)*
Day 30	Due date for Response from licensees *(to facilitate 30-day period of consultation)*
Day 40 +	Hearing for Licensees and third parties with a legitimate interest *(not less than 10 days of receipt of responses from licensees)*
Day 60 +	Report and opinion of TRC *(not less than 60 days of date of publication of the Notice)*
Day 90 +	Directive *(not less than 90 days of date of publication of the Notice)*

Conclusion

Upon conducting an analysis of all responses received, the TRC finds that there was no evidence submitted by the operators strong enough so as to merit any change in the proposed method of regulating the IPLC and IMDS markets to facilitate international connectivity. In the view of the TRC, the benefits of lower international connectivity prices should be available to consumers in the Virgin Islands as soon as the schedule prescribed in the regulatory framework will allow.

Therefore, the TRC will now proceed to engage LIME BVI in negotiations as to the amendment of its Licence to give effect to the proposed IPLC and MPLS pricing.