Value Every Moment

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07 February 2014

Mr. Mark Connors
Head of Economics and Regulation
Information and Communications Technology Authority
PO Box 2502
3rd Floor Alissta Towers
Grand Cayman, KY1-1104

Dear Mr. Connors,

Re: Classification of LIME's MetroNet Service as a Category 1 Service

In reference to your letter of 16 December 2013, Cable and Wireless (Cayman Islands) Limited, t/a LIME ("**LIME**") appreciates the timeliness of the Authority's response to LIME's service filing for the introduction of MetroNet, a domestic service for business customers.

In its service filing, LIME applied for authorization to offer MetroNet as a Category 3A service, on the grounds that the service is functionally equivalent and a domestic counterpart to LIME's international MPLS IP-VPN service, which the Authority previously approved as a Category 3A service.[1] However, the Authority rejected LIME's service filing, based on the following conclusion:

> "[MetroNet] is similar, if not identical to the functionality of DPLC service or an arrangement of multiple DPLCs. As DPLC service is categorized as a Category 1 service, the Authority determines that MetroNet service is also appropriately

[1] To be clear, the two services use the same technology and are functionally identical VPN services, but for their geographic scope. MPLS uses international transmission to connect multiple customer locations worldwide, creating a wide area network ("**WAN**") VPN, whereas MetroNet uses domestic transmission to connect multiple customer locations within the Cayman Islands, creating in effect a metropolitan area network ("**MAN**") VPN.

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categorized as a Category 1 Service and the regulatory treatment for DPLC service should apply to MetroNet service."

LIME is of the view that the Authority has erred in its assessment of the appropriate tariff category in which to place its MetroNet service and that the decision that MetroNet is a Category 1 service is inconsistent with precedent set by the Authority's tariff categorization of LIME's MPLS IP-VPN QOS service. LIME hereby seeks to outline the reasons for its view and asks that the Authority consider the facts presented and reconsider its decision.

Jurisdiction to Reconsider the Decision

LIME submits that the Authority has jurisdiction to reconsider its 16 December 2013 decision on the categorization of LIME's MetroNet service (the "**Decision**"). The decision does not fall within one of the subject matters enumerated in section 78(1) of the Information and Communication Technology Authority Law (the "**Law**"). Accordingly, this present request for reconsideration is not an application pursuant to that section. Instead, LIME is applying pursuant to the Authority's residual jurisdiction under the Law to reconsider its decisions.

The Authority has previously determined, most notably in ICT Decision 2010-3[2] and ICT Decision 2010-11[3], that it would reconsider its decisions pursuant to that residual jurisdiction, if there was a procedural or substantive flaw in the Authority's approach at first instance. LIME submits, for the reasons set out in the following sections of this letter, that there are in fact such procedural or substantive flaws, and that the Authority should therefore entertain LIME's request.

The Authority has also stated in earlier decisions, including ICT Decision 2009-1[4] and ICT Decision 2010-11[5], that applications for reconsideration of decisions that fall outside of the matters enumerated in section 78(1) of the Law, must be filed within the fourteen (14) days of the decisions specified in section 78(3) of the Law. LIME submits that this is an incorrect reading of the Law. Section 78(3) states on its face that it applies to decisions specified in subsection (1). Section 78(1) states on its face that it applies to the types of decisions enumerated in paragraphs (a) through (l).

In other words, the Legislature intended for the procedures in section 78(3) apply to applications to reconsider the enumerated decisions. The Legislature was silent on the procedures to apply to other types of decisions. In this case, it is more appropriate for the Authority to apply the procedures that would apply to applications for judicial

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2 ICT Decision 2010-3, "Decision on LIME's Application to Reconsider the 14 January 2010 Interim Directive on the Use of Deep Packet Inspection and Similar Technologies", 4 March 2010, at paragraphs 9-10.

3 ICT Decision 2010-11, "Decision on LIME's Application to Reconsider Certain Aspects of ICT Decision 2010-9", 29 October 2010, at paragraph 15.

4 ICT Decision 2009-1, "Decision on Digicel's Application to Reconsider ICT Decision 2008-5", 9 February 2009, at paragraph 19.

5 At paragraph 17.

review, namely that such applications be filed within a timely and reasonable period of time from the date of the original; decision. LIME submits that the present application satisfies that standard.

Fundamental Procedural or Substantive Flaws

As noted above, LIME submits that the Authority's Decision contains fundamental flaws such that the Authority ought to reconsider it, notwithstanding the general public policy in favour of the finality of Authority decisions. In this instance, the Decision contains a substantive flaw, when it mischaracterized MetroNet service as being "similar, if not identical" to Domestic Private Leased Circuit ("**DPLC**") service. As a result the Decision applied the incorrect analysis for determining the appropriate categorization of the service.

Given that the appropriate tariff categorization of MetroNet hinges on whether or not it is in fact a "new" service, the extent to which it differs from existing services, and the provisions of LIME's ICT Licence regarding the tariff treatment of a new service, we will begin with addressing these aspects.

The Nature of the Service

LIME's MetroNet service is designed for business customers with the requirement to share information with multiple locations at different bandwidth speeds due to varying demand. For example, a VPN connecting multiple branch offices to a head office might employ greater bandwidth at the node connecting the head office than it might use at any one of the nodes connecting the branch offices to the VPN.

Furthermore the interconnecting locations included in the service are connected using Ethernet as the transport protocol, which facilitates very high transmission speeds and traffic management capabilities. Key inputs to the MetroNet service are local circuit functionality and domestic MPLS functionality, such as Traffic Management features governed by SLAs. When these features or functionalities are combined, the business customer benefits from a new service, with functionality and QOS benefits that far exceed that of DPLC functionality. It should also be noted that the proposed tariff structure for the MetroNet reflects a premium for the additional utility provided by the service. Thus the Authority wrongly characterized "MetroNet" service as "similar, if not identical" to DPLC service, on the basis that it "provides data connectivity service functionality". On the contrary, DPLC functionality is at most a mere "dumb pipe" input to MetroNet service.

To be clear, LIME's DPLC circuits provide dedicated symmetric transmission capacity between fixed locations, on a point-to-point basis. (LIME is aware of some parties who claim to offer point-to-multipoint leased circuits, however, LIME does not.) While these

circuits provide secure transmission paths, connecting multiple sites to create a network with "any-to-any" communication capability requires multiple services.[6]

In contrast, Virtual Private Networks (VPNs) provide point-to-multipoint data connectivity solutions. While the transmission capacity at any given node of the VPN may be symmetric, each node on the network can have a different level of capacity, thus its functionality is distinctly different from that of a DPLC (i.e. VPNs and DPLCs do not provide the same service functionality and hence are classified in different service categories). In addition, the transmission paths between locations in a VPN are not dedicated, but rather traverse a shared network with network protocols keeping the customer data logically separate. LIME's VPNs also include network management capabilities, burstable capacity features, and class-of-service features not provided over "dumb pipe" solutions like leased circuits. Thus it is incorrect to conclude that VPN services, such as MetroNet and MPLS are the same or similar to a DPLC service or a combination of multiple DPLCs.

By way of example, we have attached two service descriptions from AT&T, describing their "Local Private Line Service" and "OPT-E MAN Switched Ethernet Solution", respectively. As in the case of LIME's DPLC and MetroNet services, the former is described as "dedicated, private and secure", whereas the latter is described as managed service with all of the benefits and features that come with that management.

LIME notes that OfCom also acknowledges the two services as being different and distinct. At paragraphs 2.6 and 2.25 through 2.28 of the March 2013 "Final Statement" of the Business Connectivity Market Review, OfCom describes the equivalent of LIME's DPLC and proposed MetroNet services as follows:

> 2.6 Leased lines provide dedicated transmission capacity between fixed locations, and are essential components of information and communications technology (ICT) services used by businesses.
>
> […]
>
> **Retail services**
>
> Leased lines
>
> 2.25 Retail leased lines are fixed connections that provide end-user organisations with dedicated symmetric capacity between their sites. They can be used for a variety of communications including voice, video and data communications.

[6] With the numbers of circuits and attendant complexity increasing by n(n-1)/2 for n sites. Customers who do not wish to manage this complexity can opt for a hub and spoke topology, where the number of circuits increases by n-1 for n sites, but these customers would lose the "any-to-any" connectivity that they had been looking for and would introduce a major single point of failure.

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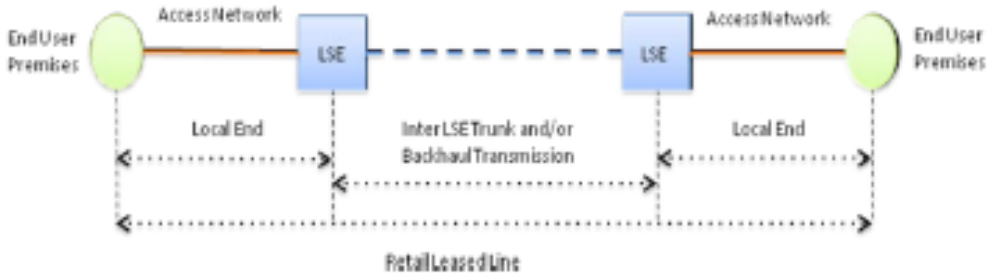
Figure 2.2 Retail leased line

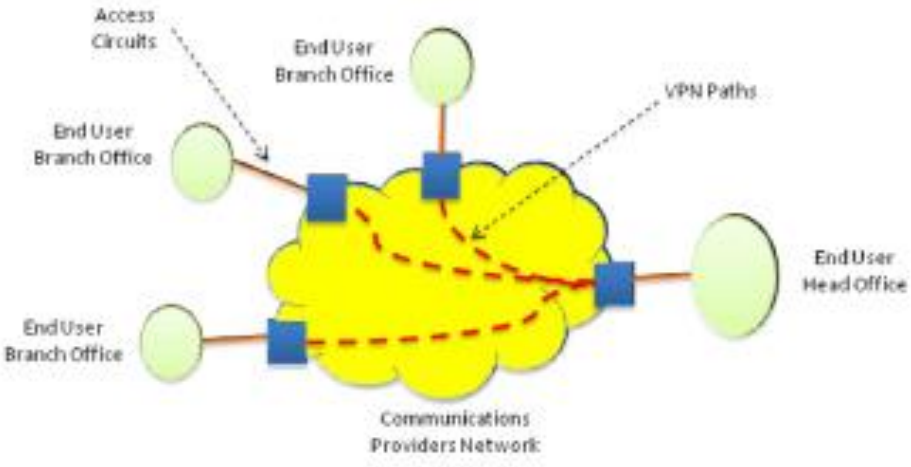


2.26 Figure 2.2 above shows a simplified configuration. The business sites at each end of the circuit are linked to the nearest nodes in the CP's network (the Local Serving Exchange (LSE)) using an access network. The access network links are commonly known as 'local ends'. Connectivity between the LSEs may be provided by a direct fibre or copper connection or, more commonly for longer distance connections, using the CP's backhaul and core transmission network.

Virtual private networks

2.27 Organisations often use leased lines to build private networks linking their sites together so that offices can exchange data and access corporate applications. Virtual private networks (VPNs) provide an alternative to private data networks to achieve this functionality, using a public core network provided by a CP. The organisation's data is transmitted typically using virtual paths across a core infrastructure shared with other services. Specific protocols are used to ensure the privacy of each user organisation's transmissions through the shared infrastructure. The figure below illustrates a simple example connecting several branch offices to a head office.

Figure 2.3 Virtual Private Network (VPN)



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2.28 Each site needs an access circuit to connect it to the VPN. This may be provided with a leased line but other types of connection such as ADSL broadband are also used depending on the user's requirements.

At paragraph 3.120, OfCom affirms its conclusion that the two services are different, concluding that "VPNs therefore differ from leased lines that make use of dedicated point-to-point capacity over the entirety of the route." To the contrary, VPNs offer a much wider array of functionality and service quality than DPLCs can offer.

VPN services like LIME's proposed MetroNet service, therefore, are not "similar, if not identical to" LIME's DPLC services. LIME notes that, in its 3 December 2013 application, it had described MetroNet as being a point-to-multipoint service and compared it to similar point-to-multipoint services being offered by its competitors. To the extent that the Decision determined that MetroNet was "similar, if not identical to" point-to-point services, it is unreasonable and substantively fundamentally flawed.

Geographic Market for VPN Services

In its 16 December 2013 letter, the Authority noted that LIME presented limited information on competition in the "domestic data transport" market. LIME does not yet offer MetroNet and therefore its in-service quantities are zero. However, if the Authority had meant this market to include DPLC-type services as well, LIME would dispute that definition, as DPLCs and VPNs like MetroNet are different services.

In any event, LIME notes that its competitors do not publish information on their sales, and that the Authority does not collect it either, therefore, there is little information to provide here. LIME understands, for example, that the Cayman Islands Government both self-provides an internal MAN and purchases a separate VPN service from Digicel. LIME also understands that Digicel also provides VPNs to two other customers, one offering food and beverage services at 5 sites across Camana Bay and Seven Mile Beach, and the other a diversified provider of retail and wholesale construction and tool services and products with four sites. LIME also anticipates that Dart self-provides or has acquired from a telecommunications provider a VPN to connect their various businesses across the island. Finally, LIME is aware that WestStar is contracted to provide services to Cayman Health City, which are likely to include VPN services like MetroNet, given the size of the property. Between major customers self-providing VPNs, and services offered and/or provided by Logic, WestStar, C3 and Digicel, it is clear that the market for MetroNet VPN services is already highly contested, and LIME's entry into that market will only increase that competition

The Authority also determined that the evidence regarding VPN services offered by competitors was insufficient, in part because the coverage area of competitors' networks "is only a limited area of the domestic geographic market." LIME would like to respond to this particular point and introduce further information on the nature of competitors' ability (actual or potential) to offer VPN service.

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The information provided in LIME's service filing demonstrated that Logic/Telecayman's fibre network spanned the George Town area and Seven Mile Beach corridor. In addition, there are two additional operators, WestStar and Infinity Broadband (trading as C3), with networks in this area and beyond. The network service areas of these three operators is identified in the table below.

Competitors' Wireline Network Deployments in Grand Cayman

Operator	Area of service network coverage
WestStar	• George Town • Seven Mile Beach • West Bay
Logic	• George Town • Seven Mile Beach
C3	• South Sound • George Town

While the Authority is correct that these operators' networks span only a "limited area of the domestic geographic market," it is important to understand that this area is where the vast majority of business customers (of which potential MAN or VPN customers are a subset) reside in the Cayman Islands. For example, LIME estimates that the area covered by these operators' networks covers approximately # # of LIME's existing DPLC service locations (i.e., both end points of a DPLC), as the table below demonstrates. While LIME does not believe that DPLCs are a close substitute for VPN service, as indicated previously, it is true that DPLCs are a potential input to VPN service and, therefore, a certain subset customers taking DPLC service could represent a potential demand for MetroNet, once the service is offered by LIME. Therefore, identifying the locations of LIME's existing DPLC customers provides some (albeit imperfect) estimate of the scope of the geographic market, and identifying the extent to which competitors' networks overlap this geographic area indicates that competitors can reasonably address the market.

LIME DPLC Service Location in the Cayman Islands*

District	LIME Cayman DPLC Geographic Distribution
George Town	###
Seven Mile Beach	###
South Sound	###
West Bay	###
Bodden Town	###
East End	###
Northside	###
Cayman Brac	###
Little Cayman	###
Total	100%

** Based upon active DPLC service addresses, as of 8 Jan 2014.*

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As the Authority is aware, LIME offers its DPLC service at the same price, irrespective of the district(s) of the customer or of the end-points. This means that competition in the geographic market for DPLC services covering the vast majority of LIME's DPLC services and containing the vast majority of the customers and potential customers for such services, will clearly constrain LIME's prices and protect the interest of consumers in the rest of the country. Put more simply, customers outside of the George Town – Seven Mile Beach corridor will benefit equally from the facilities-based competition inside that corridor. There is no logical basis for concluding, as does the Authority, that competition in the market for DPLC services is somehow limited simply because the geographic scope of network deployments might be limited and, in this respect, the Authority's decision is fundamentally flawed. Similarly, MetroNet, if approved, will be offered at the same price, irrespective of where the customer is located on island. This means that, as is the case with DPLCs, all potential MetroNet customers will benefit from competition, even those potential customers located in areas where competitors' networks may not yet be deployed.

While MetroNet VPNs and DPLC services are not the same, the potential customers for VPN services are likely to be a subset of the DPLC business customer base. This means the above discussion in relation to DPLCs is relevant to MetroNet: competition for business customers, the vast majority of which are in the George Town – Seven Mile Beach corridor and therefore served by competitor networks, will protect the interests of those few potential MetroNet customers who might not be in that corridor.

In light of the evidence provided in LIME's service filing, and the clarification provided herein, LIME believes there are sufficient grounds, based on competitor activity, for classifying MetroNet service as a Category 3A service.

Appropriate Analysis

Because the Authority erroneously determined that MetroNet was "similar, if not identical" to DPLC, the analysis applied by the Authority in determining the appropriate categorization of the service was also fundamentally flawed. As a result, the Authority erroneously determined that MetroNet should be regulated like LIME's DPLC services.

LIME has in past submitted three applications for new point-to-point services that were akin to DPLCs,[7] and one application for a new VPN service that was similar to Metronet.[8] In the case of the three point-to-point services, the Authority correctly determined that they were, to use the phrasing in the Decision, "similar, if not identical" to DPLCs and placed them in Category 1. In the case of the VPN service, at the time,

[7] Wireless Backup Leased Circuit (determination by letter dated 21 August 2008), Digital Access Circuit Service (determination by letter dated 5 December 2008), and Managed IP Circuit Service (determination by letter dated 2 April 2009).

[8] MPLS IP-VPN service (determination by ICT Decision 2006-3, "TeleCayman's Request re: MPLS and CJFS Cable System Pricing", 20 November 2006).

the Authority applied the correct analysis (detailed below) under Annex 5 of LIME's Licence and determined that it was a Category 3A service.

The Authority should have conducted a separate analysis under paragraphs 29 through 34 of Annex 5 to its ICT Licence. In fact the Authority correctly took this approach when analyzing LIME's new IP-VPN QOS service in comparison with its existing International Private Leased Circuit ("**IPLC**") service. Refer below to our summarized understanding of the IP-VPN QOS approach taken by the Authority in ICT Decision 2006-3 and, in brackets, how that same approach would apply to the analysis of the proposed MetroNet service;

1. **Step 1**: Analysis of the facts concluded that IP-VPN QOS is a new service and that though it is akin to the IPLC service it is not an IPLC service and hence cannot be classified as a Category 1 service on that basis.

   [Similarly MetroNet is a new service and, while it is akin to MPLS, it is neither a DPLC nor an MPLS service and, on that basis, should not be placed in Category 1]

2. **Step 2**: Consider that as a new service IP-VPN QOS would be placed in category 1, but for the Fact that LIME's Operating Licence requires that new services are not to be placed in category 1, unless it is non-discriminatory and there is insufficient competition (i.e. both conditions must be present for it to be placed into Category 1). Since IP-VPN is a discretionary service it does not belong in Category 1 and Category 2 should be considered.

   [Similarly, since MetroNet is a discretionary service facing competition from other licensees in the Cayman Islands, it does not belong in Category 1, and Category 2 should be considered instead]

3. **Step** 3: Given that Annex 5 to LIME's ICT Licence stipulates that any service that faces or could face competition ought not to be placed in Category 2, the IP-VPN QOS service was appropriately designated as a Category 3A service.

   [Similarly, given that LIME's MetroNet service can face or faces competition from the equivalent service offered by at least one competitor, the rules set out in Annex 5 stipulate that it too should be designated as a Category 3A service.]

By not applying the analysis appropriate to a new VPN service, there was a fundamental flaw in the substantive approach applied by the Authority.

<u>Conclusion</u>

Based on the above facts presented, LIME respectfully asks that the Authority reconsiders its flawed determination that LIME's new MetroNet service is a Category 1 service and should be regulated in the same manner as LIME's DPLC service.

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Confidentiality Claim

This letter is being filed under confidential cover. The detailed customer information presented above is of a commercially sensitive nature and is consistently treated in a confidential manner by LIME. In the event the information were to be treated otherwise, LIME's competitors and potential competitors would gain detailed information on LIME's customer base, which they would use to better target LIME's customers. This would put LIME at a competitive disadvantage, and would cause LIME specific and direct financial harm.

An abridged version of this letter will be filed. All confidential information in this letter will be replaced by "###".

Please contact the undersigned directly should you have any questions.

Yours faithfully,
Cable and Wireless (Cayman Islands) Limited, trading as LIME

[signed]

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Frans Vandendries
Vice President, Legal, Regulatory and Corporate Affairs

c.c. Bill McCabe, Chief Executive Officer, LIME
Rod Kirwan, General Counsel, LIME

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