



Our ref: GRGR/GR/15.19

5 June 2013

Mr. David Archbold  
Managing Director  
Information and Communications Technology Authority  
PO Box 2502  
3<sup>rd</sup> Floor Alissta Towers  
Grand Cayman, KY1-1104

Dear Mr. Archbold,

**Re: Digicel request for further responses from LIME – CD2012-1**

Further to the Authority's instructions provided in its 13 May 2013 email to the distribution list, and in response to the information provided by Digicel in its 23 May 2013 letter (Re:-FTR and Transit Rate (CD 2012-1): Answering Interrogatories), Cable and Wireless (Cayman Islands) Limited, trading as LIME ("LIME") submits the attached supplemental answers to Digicel's interrogatories.

In so doing, LIME would like to make clear that Digicel's objections to the initial answers hinge on Digicel's repeated refusal to accept the framework of this proceeding, which is *not* to model LIME's fixed network, mobile network, or any combination of the two, but instead to model a forward-looking, stand-alone fixed network of a hypothetical efficient operator. Digicel has been reminded of this fact, most recently by way of LIME's initial answers, but has instead chosen to accuse LIME of obstruction. LIME categorically denies this allegation. LIME's intent is not to be evasive or non-responsive, but to provide information that is relevant and useful to the stated purpose at hand.

Please do not hesitate to contact the undersigned should you have any questions.

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

'Signed'

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Anthony Ritch  
General Manager (Cayman), LIME

c.c. Frans Vandendries, VP Legal and Regulatory Affairs  
Rod Kirwan, Group General Counsel, LIME  
CD2012-1 Distribution List

## LIME Response to Digicel Interrogatories

1. Is the cost of LIME's NGN soft switch already included in the mobile termination rate?

**LIME response:** As required by the Authority's prior determinations, the FLLRIC model has separate modules for fixed and mobile networks, so as to model their costs on a stand-alone basis.

**LIME supplemental response (5 June 2013):** Consistent with the Authority's prior determinations, the mobile network is modeled as a stand-alone network. This means that the mobile network does not share switching capacity with the fixed network and the cost of a soft switch needs to be counted towards the cost of fixed termination or transit.

In any event, given that the mobile and fixed networks are modeled on a stand-alone basis (as required by the Authority), it should have been self-evident to Digicel that the inclusion of any given cost in the mobile model would be irrelevant to inclusion of that same cost in the fixed model.

2. Is the soft switch being used for sending traffic to the incumbent's fixed and mobile subscribers? If not, what would be necessary to enable it to handle traffic for both fixed and mobile traffic?

**LIME response:** The ICTA's FLLRIC guidelines require separate cost models for the mobile and fixed networks.

**LIME supplemental response (5 June 2013):** The soft switch is used for originating fixed-to-mobile as well as fixed-to-fixed traffic and terminating mobile-to-fixed as well as fixed-to-fixed traffic. Digicel's question of whether the soft switch is "being used for sending traffic to the incumbent's fixed and mobile subscribers", therefore, does not make much sense.

If the question is why the soft switch is not being used by the mobile network, please refer to the Authority's FLLRIC guidelines, which indicate that the mobile and fixed networks are to be modeled as separate and stand-alone networks. Even if the same soft switch could be enabled to handle traffic for both fixed and mobile traffic, it would not be appropriate to model this in the FLLRIC models. LIME notes that its soft switch does not and cannot act as a converged platform nor was it intended to operate as such, and that it is not aware that the fixed soft switches of the other fixed operators in the Cayman Islands are configured to handle both mobile and fixed traffic (which in any event would be irrelevant, as the fixed and mobile networks are to be modeled as stand-alone networks).

3. Does LIME's mobile switch have layered architecture or is it release 4 or above compliant?

**LIME response:** This question is not relevant to this proceeding, the purpose of which is to model a forward-looking efficient fixed network, not mobile network.

**LIME supplemental response (5 June 2013):** As noted earlier, the answer to this question is not relevant to this proceeding, as the purpose of this proceeding is to model a stand-alone fixed network. Whether LIME's mobile switch is release 4 compliant or not would not shed any light on the costs of operating a stand-alone fixed network. Given that separate networks are to be modeled, the transit elements of the fixed module of the FLLRIC model remain relevant and should not be removed.

In any event, LIME operates separate fixed and mobile switching platforms.

4. What proportion of the traffic using the NGN is Digicel mobile traffic?

**LIME response:** This question cannot be answered as the FLLRIC model represents a forward-looking efficient operator, and not any individual licensee actually operating in the market.

**LIME supplemental response (5 June 2013):** This question is not relevant as the NGN is not being used at all for "mobile" traffic in the manner in which Digicel is suggesting. The NGN is being used to transit traffic of other operators, some of whom are mobile operators (LIME and Digicel) and some of whom are fixed operators (LIME, Digicel Logic and Telecayman). In all cases, however, it is "transit" traffic, not "mobile" traffic.

In any event, the volumes used in the model are explicitly given.

5. What proportion of the total traffic handling capacity of the NGN is represented by Digicel's mobile traffic?

**LIME response:** This question cannot be answered as the FLLRIC model represents a forward-looking efficient operator, and not any individual licensee actually operating in the market.

**LIME supplemental response (5 June 2013):** This question is not relevant as the NGN is not being used at all for "mobile" traffic in the manner in which Digicel is suggesting. The NGN is being used to transit traffic of other operators, some of whom are mobile operators (LIME and Digicel) and some of whom are fixed operators (LIME, Digicel, Logic and Telecayman). In all cases, however, it is "transit" traffic, not "mobile" traffic.

In any event, the volumes used in the model are explicitly given.

6. Does the traffic destined for LIME's mobile network from Digicel pass through the NGN in one direction only?

**LIME response:** This question cannot be answered as the FLLRIC model represents a forward-looking efficient operator, and not any individual licensee actually operating in the market.

**LIME supplemental response (5 June 2013):** We note that the explanation of this interrogatory provided by Digicel in its 23 May 2013 letter does not appear to be consistent with the original interrogatory. LIME confirms that traffic is **not** unidirectional through the NGN soft switch as Digicel is suggesting. The traffic from Digicel destined for LIME's mobile network (and indeed all networks other than LIME's fixed network) passes through the NGN switch in one direction; the traffic destined for Digicel from LIME's mobile network (and indeed all networks other than LIME's fixed network) passes through the NGN switch in the other direction.

7. Which Codec is being used to send Digicel inbound traffic from the NGN to LIME's mobile switch?

**LIME response:** This question is not relevant to this proceeding, as the identity of the codec used by a switch has no material if any impact on the costs associated with terminating voice calls on or transiting voice calls through that switch.

**LIME supplemental response (5 June 2013):** Voice is not being transmitted in packet format direct from the POI to mobile users as it goes through a TDM gateway twice. The mobile voice traffic (e.g., from the Digicel network), after traversing the POI, is packetized at the TDM gateway then passed to the NGN soft switch. It then comes back through another TDM gateway before traversing the interconnect link to the other mobile operator (e.g., LIME mobile network).

In any event, whether the traffic transits the fixed network in native packet format or after packetizing at a TDM gateway is not relevant. The Authority's determinations in the FLLRIC proceeding require stand-alone networks to be modeled. This means that, under these models, traffic will pass from one network through another to get to a third network via a transit service provided by the intervening network.

8. Does the soft switch separate traffic for fixed and mobile subscribers and route them accordingly?

**LIME response:** In accordance with the Authority's guidelines, the FLLRIC model is modeling a separate, stand-alone fixed network.

**LIME supplemental response (5 June 2013):** We note that the explanation of this interrogatory provided by Digicel in its 23 May 2013 letter does not appear to be consistent with the original interrogatory. In any case, LIME's fixed and mobile subscribers are supported on separate switches. Therefore, the fixed and mobile traffic are not split by the same switch.

9. Does the soft switch route the fixed traffic to different geographic locations based on the number dialed?

**LIME response:** Yes.

10. What class of switch is the NGN? Does it have class 4 or class 5 capabilities?

**LIME response:** The FLLRIC model assumes that a forward-looking efficient fixed operator would deploy a fixed switch with both class 4 and class 5 capabilities.

11. What type of technology interface exists between the NGN and MSC? TDM or IP, Sigtran or low speed SS7?

**LIME response:** This question is irrelevant to this proceeding. The specific type of technology interface between a fixed switch and a mobile switch has no material if any impact on the costs associated with terminating voice calls on or transiting voice calls through a fixed switch.

**LIME supplemental response (5 June 2013):** The technology interface between the NGN and MSC is TDM and low-speed SS7. In any event, whether the interface between the NGN and the MSC is IP or not is not relevant to this proceeding. The Authority's determinations require separate, "stand-alone" cost models for the fixed and mobile networks.

12. On the 'fixed services costs' sheet at cell J6 – the title of this column is "domestic data service." However, there is no evidence that any data demand is incorporated in these costs on minutes over the leased lines. Can LIME explain this?

**LIME response:** We disagree that demand is not incorporated into the costs of domestic leased circuits. The types of costs that are associated with 900-

DOMESTIC LEASED CIRCUITS WHOLESALE in column J are evident in column A: Some are line-driven, some are minute-equivalent driven, and some are bandwidth driven. Ultimately, the cost of the service is determined in terms of circuit speed so that it can be consistent with the tariffing.

13. We question the use of a routing factor of 0.25 in Routing Factors Input, cells F4, F5 and F8. In our view the routing factors ought to be 1.00, reflecting the fact that in proper NGN environment there is no difference to the treatment of voice and data traffic, as all is handled using IP. Can LIME justify making these routing costs less than 1.00 for the MSE cost elements (e.g., see the NGN diagram referenced in Technical Assumptions, cell D23 as Appendix XVII)?

**LIME response:** Please refer to the discussion of this matter set out at the top of page 5 of our 2 October 2012 submission in this proceeding.

14. Has the Authority independently verified traffic data provided by LIME in respect of LIME's model for fixed and transit costs and if so how was the traffic information verified?

**LIME response:** LIME does not have information on any "independent verification" that may have been performed by the Authority.