TATA

TCL/RA/TCL/TRAI CP-IUC/2019/12

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Sub: TCL Response to TRAI Consultation Paper on Review of Interconnection Usage Charges

Dear Sir,

Kindly find attached herewith Tata Communications Ltd. response on the TRAI Consultation Paper dated 08.11.2019 on " Review of Interconnection Usage Charges".

It is requested that the same may kindly be taken on record.

With kind regards,

For Tata Communications Ltd.

P Sharma

(Praveen Sharma)
Authorized Signatory

Encl: a/a.

TATA COMMUNICATIONS LTD. RESPONSE TO CONSULTATION PAPER ON REVIEW OF INTERCONNECTION USAGE CHARGE

1) **Keeping in view the changes happening in the international telephony market structure, is there a need for change in the existing regulatory regime for International Termination Charge (ITC) i.e. change the existing regulatory regime from fixing the uniform rate of ITC to an alternate approach? Kindly justify your comments with supporting arguments.**

   TCL Response:

   In our view ITC is a key issue for the telecom sector. As of today's, regime, we are, as stand-alone ILDO, contributing a substantial market share in India's termination. This is because as an ILDO, Tata communications has deployed global infrastructure including submarine cables and international gateways for facilitating direct hand over of the calls by international operators to Tata communications. This has been done mainly to maintain the QoS of the calls and enhancing the end-user experience which enables them to use the legal route.

   Besides investing in infrastructure, Tata Communications has also invested in people and marketing in international destinations and today have direct interconnect with 400 plus mobile operators of the world. Tata Communication has in total more than 2000 plus Global Operators connected to their Switches spread across multiple geographies. Tata Communications being the incumbent ILDO of India has set a benchmark for India termination traffic and that has benefited all other ILDO who subsequently become the ILDO and also has Access or mobility license.

   The Framework for interconnection usage charges must be based on the principle of "work done", wherein cost of each un-bundled network element used for carriage of calls is considered for arriving at the applicable Interconnection Usage costs and sharing of such costs between operators involved in carriage of the calls. This Framework was rightly adopted in the Regulation on Reference Interconnect Offer (RIO) and consistently adopted since the first IUC Regulation dated 24th Jan 2003.

   In this context we would like to reproduce the observations made by the Authority in IUC Regulation dated 24th Jan 2003:

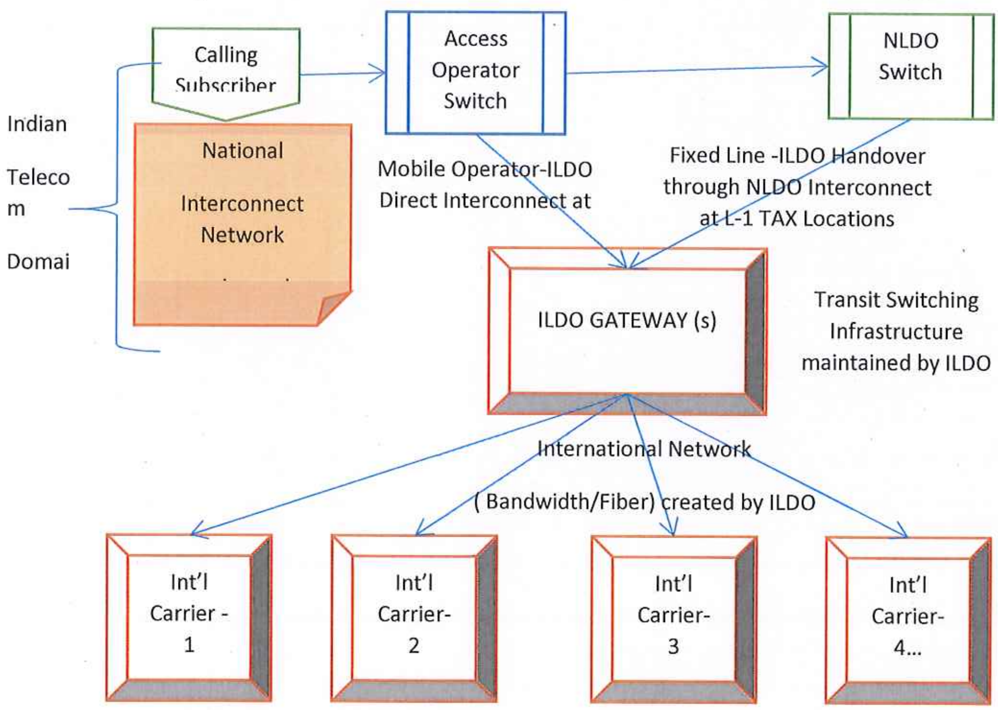
   "IUC has to be determined based on minutes of usage for various Unbundled Network Elements and the cost of these elements. As brought out in the Reference Interconnect Offer (RIO), the IUCs for Origination, Transit and Termination are based on the principles of element based charging i.e. one operator charging the other for the resources consumed for carriage of its calls in terms of minutes of use (MOU)."

At present ILDOs play an extremely significant role to ensure call completion. However, the current market situation is making it unviable for ILDOs to sustain the ILD business. Especially in case of ILD Incoming calls due to cut throat competition in this segment, the settlement rates to India have dropped to unsustainable levels. This has been brought out in multiple submissions made by Indian operators in the past. It may be seen that while the regulations have ensured that the access operators are compensated duly (and in case of the latest regulations currently applicable allowing Rs 0.30/min of termination charges more than the due share) against the actual cost of network /work done for completion of these calls, the ILDOs have been bearing the brunt of reduction of costs both on the outbound traffic and the inbound traffic. While currently the cost of termination to India for an ILDO is Rs 0.30/min., the market price for India termination being offered by some carriers is as low as 0.48 US cents (USD 0.0048 or INR 0.345) which leaves a meagre margin of only 0.05 US cents (~ 4.5 paisa) for ILDOs. The margins being made by ILDOs are not even sufficient to cover the cost of bandwidth being maintained by the ILDOs for carriage of calls leave aside getting a reasonable return on their investments.

The call flow in case of International Calling needs to be taken into account to determine the "work done" by the various entities involved.

A simplistic block diagram is presented below to provide details of the call flow in case of ILD Outbound and ILD incoming calls:

Figure 1: Call Flow and provision of network by ILDOs for carriage of ISD calls from India to the world



Multiple Interconnects with International Carriers maintained by ILDOs to ensure call completion to all destinations across the world

ILDOs carriage of outgoing ISD calls from India involves:

1. Picking up calls from GMSC POIs from all 23 circles (for interconnections at L-1 TAX locations with Mobile Operators) ,

2. Backhauling the calls to its ILD Gateway switch across the country (in some cases involves carriage over 500 Km across the country),

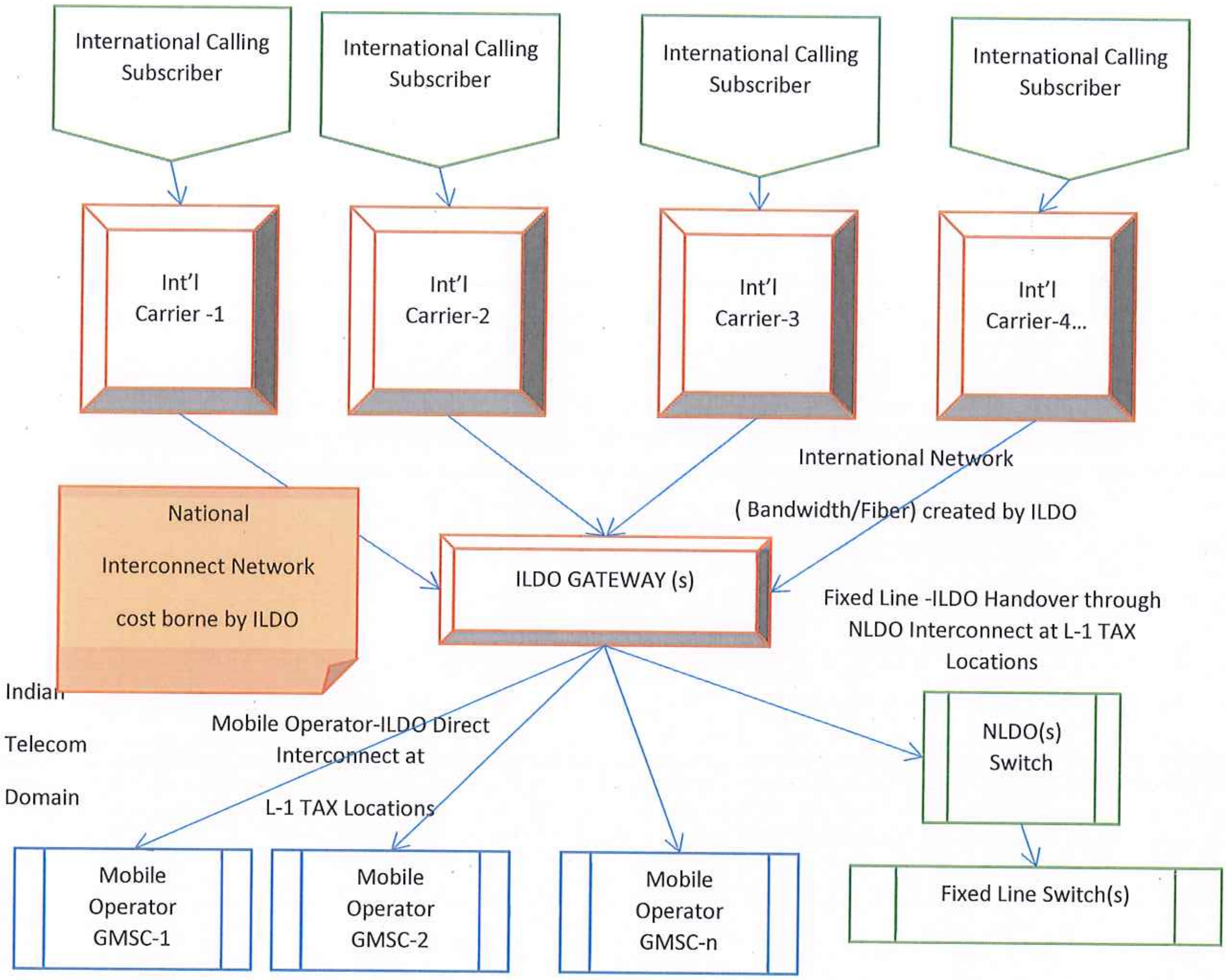
3. Switching of calls at its ILD Gateway to the correct International Carrier,

4. Implementation of Optimal Routing on ILD Gateway based on different foreign carriers offering different Costs & capacities for calls to various destinations. The routing of ILD calls is much more complex than domestic call routing since it entails arrangements with multiple operators for each country of termination and handling of complex numbering plans for each country. This requires sizable investments and operations costs in managing ILD outbound traffic and delivering an optimal cost for terminating the calls. Indian customers making international calls benefit from the lower costs and good quality of service achieved through such routing optimization systems deployed by the ILDOs.

5. Carriage of calls through a International network created through submarine/satellite capacity to interconnect international carriers across the world. Costs of building redundancies and scalable networks need to be factored in.

6. Handover of calls at designated locations to the international carriers. This involves payments of transit charges, co-location charges and exchange rate variations which impact the costs of the ILDO.

Figure 2: Call Flow and provision of network by ILDOs for carriage of incoming ILD calls from international carriers to India.



Termination of Incoming calls by ILDOs involves:

1. Pickup of calls from International Carriers through the global interconnections created with multiple International Carriers and different point of presence outside India.

2. Carriage of calls from International locations to ILD Gateway in India on submarine capacity/satellite capacity. There are associated costs of providing redundancies and scalability of the network deployed to cater to this traffic. Both Voice and Signalling traffic requires investments by the ILDOs.

3. Switching of calls at the ILD gateway to the correct mobile/fixed line network

4. In case of MNP dipping into the MNP database to resolve actual mobile network where the call needs to be terminated for ported numbers.

5. Carriage of calls to designated point of handover to either a Mobile Operator GMSC(at L-1 TAX location interconnects) or to the NLDO designated transit switch for fixed terminations

6. Handover of calls at the designated point of handover.

In addition to the above, ILDOs need to significantly invest in the following infrastructure/assets to manage the routing/billing/settlement of calls:

1. International SS7 interconnects to manage signalling

2. Routing systems to manage complex routing. International routing involves managing multiple country number plans and ILDO switches need the capability to route at a granularity of country-operator-addressable codes. For e.g. in case of calls to United Kingdom, the ILDO switches need to resolve apart from country codes the actual network (e.g. UK Vodafone, UK O2, UK Orange, etc), the codes being supported /active with these networks (e.g. +44 7XX YYY), cost of terminations to these codes at various hours in a day, cost of termination to these codes on various days of the week.

3. Billing systems to manage

    a. National Interconnect billing (Indian Interconnects for ILDOs means average 7-8 mobile operator interconnects per circle)
    b. International interconnect billing which include various mechanism of settlements e.g. Billing based on invoices, billing and settlement based on declarations of traffic.
    c. Multiple billing cycles with various international carriers
    d. Multiple currencies with various international carriers and manage exchange rate risks

4. QoS Monitoring systems to ensure
    a. Standard Quality of service for international calls
    b. End – end measurements of QOS
    c. Near Real time network monitoring parameters

5. Settlements with multiple carrier including reconciliation and dispute resolution

6. Bad debts, legal costs to settle disputes or make collections from carriers outside India.

7. MNP NPDB database systems to manage correct routing of traffic for ported numbers not only for India calls but even for international destinations where number portability has been implemented

8. Extensive expenses to ensure restoration of network in case of transmission outages of submarine capacities.

9. 24X7 network operations support for trouble shooting.

10. Monitoring systems to comply with the regulatory directives issued by DoT and the Authority

We recommend modifying the IUC regime in respect of ITC to a level where we have amount fixed for access and mobile operators, and fix an amount for ILDO as well. We recommend keep current ITC charges at INR 0.30 payable to access and mobile operators and allocate another INR 0.24 for ILDO for their investment and efforts benefiting Indian people and government of India as these amounts will be inward money from international operators resulting higher AGR for the government. Thus we recommend an ITC of Re.0.54 out of which Re..30 will be payable to mobile/access operators and Re.24 payable to ILDO.

2) **If your response to the Q1 is affirmative, then what should be the alternate approach? Kindly elucidate the alternate approach and benefits of the same vis-à-vis the present the.**

TCL Response:

The current situation is not conducive for ILDOs to continue business and is detrimental to free competition to be maintained in India market. Not only it impacts the ability of stand along ILDOs to earn sustainable revenues, it impacts their ability to service the requirements of making the International telecommunications affordable to Indian consumers. It is extremely pertinent to address this issue at a regulatory level and ensure ILDOs are compensated duly for the work done by the ILDOs. We accordingly suggest that LDO carriage charge payable to ILDOs to be included as mandatory component in IUC.

In view of the above we submit:

1. Forbearance in International termination rates payable by access operators to ILDOs should continue
2. A new component of ILDO carriage charge of Rs 0.24/min be included in the IUC Regime to compensate for cost of carriage involved in carrying international calls to and from various international destinations.
3. All Settlement rates to International Carrier should be a sum of ILDO carriage charges (Rs 0.24/min) and present ITC payable to mobile operators (which should be present value of Rs. 0.30/min .
4. Over and above the negotiated termination rates for ILD Outbound calls being transited through ILD switches, a minimum transit charge of Rs 0.24/min should be payable by access operators to ILDOs to compensate for the deployment of complex routing systems for management of International Call routing at the ILDO Gateway.

3) **If your response to the Q1 is negative, then in the changing international telephony market structure, what other regulatory measures are required to be taken by the regulator for protecting the interests of Indian consumers and service providers? Kindly justify your comments with supporting arguments.**

TCL Response:

No comments

4) **Your comments on any other issue related to the international termination charges may also be given.**

TCL Response:

Development of new technologies like LTE, 5G and HSPA would primarily be drivers for data usage and broadband access in the coming years. In the current context of current regulations, IP calls are not allowed to be directly terminated on to PSTN/PLMN networks except if the call is made to International destinations. Hence, there at this stage, the review of IUC Costs need not be evaluated in relation to LTE, 5G and HSPA technologies. We suggest considering the impact of the developments like 5G, LTE HSPA etc at a later date as these are still in nascent stage of development. However, any consideration on IUC in future should be technology agnostic and must be coupled with changes in regulations relating to Voice over IP in India.

Further to this, Indian consumers face mainly the challenge of internet connectivity QoS in its mobile device. Mobile operators do invest in Infrastructure but as seen in recent past most of the mobile operators either are having huge debt or have closed their operations.

Needless to say, the challenge for mobile operators is that they must bear the cost of International calls termination where OTT offers these services for free making it "on-net".

In such conditions, Tata Communication suggests following regulatory measures to be considered in the updated IUC regime.

1) Is this the correct time to have different IUC charges for mobile and fixed as it has in Europe?

2) Define a regime where when an OTT is offering the services in Cloud for enterprises and making huge money from Indian enterprises, they should be entitled to pay IUC if one end of OTT is within boundaries of India. One can think of having large user databased of all enterprise OTT/UCC services and ILDO should get either a monthly license- fees or a standard ITC which can be shared by such platform to regulators.

3) Many countries have also introduced surcharge where when ILDO sees a non-regular CLI or blank CLI, they charge an additional surcharge for that particular call. This surcharge is applied on call to call basis. Tata Communications suggest introducing the same for India termination as well as this will eliminate calls originating from OTT platforms and terminating into India and maybe routed as the grey route.

Furthermore, OTT and bundle offer from operators has been encouraging development for Indian consumers. However, it has a major risk for Indian security.. Tata Communications strongly feel that OTTs should have an obligation of LIM services if they want to offer their applications in India. That will help India consumers, its integrity and the operators.

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