



TCL/RA/TRAI-CP/2011/02

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Mr. Lav Gupta,
Principal Advisor (TD)
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawahar Lal Nehru Marg,
New Delhi – 110002

Sub: TCL Response to TRAI Consultation Paper on “Issues related to Telecommunications Infrastructure Policy”.

Dear Sir,

Kindly find enclosed herewith the Tata Communications Ltd. response to Consultation Paper on Issues related to Telecommunications Infrastructure Policy for your kind consideration and perusal please.

With kind regards,

For Tata Communications Ltd.

A handwritten signature in black ink, appearing to read 'Praveen Sharma', with a horizontal line underneath it.

(Praveen Sharma)
Head – Corporate Regulatory

Encl: a/a.

TATA COMMUNICATIONS

TATA Communications Limited

VSB Bangla Sahib Road New Delhi 110001 India
Tel +91 11 66501111 66501234 Fax 91 11 66501140
Regd office: VSB, Mahatma Gandhi Road, Fort, Mumbai 400 001 India

TCL response to the CP on “Issues Related to Telecommunications Infrastructure Policy”

Overview of Telecom Infrastructure

6.1 Do you agree with the classification of infrastructure elements described in this chapter? Please indicate additions/modifications, if any, particularly where you feel that policy interventions are required.

TCL Response:

We do not agree with the understanding given in the paper is that Submarine Cable Landing Station (CLS) has been a “bottleneck facility” and there is monopolistic position of the incumbent ILD in respect of CLS. The fact is that it is actually the availability of international BW and diversity which is the bottleneck in meeting Bandwidth requirement as well as the quality of service expected by the user in India. The prime reason for this is not that incumbents or few telecom operators have monopolized over CLS availability in India but because the lack of interest among telecom companies to build CLS / Cable systems due to the same being highly capital intensive, time consuming projects associated with very long gestation period with associated risk of not being able to recover the upfront investment made for the purpose. With price of BW falling drastically year on year, it is becoming even more difficult to justify the huge upfront investment in a single cable system ranging anywhere between Rs 300- 1000 crores depending upon the ownership structure and landing points of the cable, and its recovery in decent time frame. As most ILDO/ISP operators don't prefer to take such risky route, there are few investments coming forth in such facilities and it results in an apparent monopolistic situation. Currently only 3-4 of existing ILD/ISP operators have invested in such facilities. It is not because there are entry level barriers but because of high capital intensive proposition and associated risk. So “CLS being a bottleneck” and “ILD operators being monopolistic” are not reason for unavailability of international Bandwidth but a result of it.

For constructing a private international submarine cable system, there is huge investment requirement. However, it leads to very high BW availability for sale at competitive rates to ILD/ISP and end users. Under this scenario, both Bandwidth and CLS are managed by a single carrier who always tries to meet his customer's expectation in order to recover the sunk cost. Therefore, there is in fact no need for even RIO kind of arrangement as the sole objective of such projects is to maximize the sale of BW from its cable system.

For consortium cables the investment is relatively less but at the same time Bandwidth is also less which in most of the cases even fails to meet the own network requirement of the operator. This is due to the reason that there is very long gestation period typically (between 4-5 years) between its conceptualization and RFS in respect of consortium cable.

.While Capital cost of CLS can theoretically be recovered from consortium partners , practically speaking it doesn't happen as there is relatively very few activation from other Parties who don't own and operate the station. So practically speaking ,all station capital cost and associated O&M cost is borne by the CLS operator himself which is substantial. The prime reason for this situation is very limited Bandwidth availability in such cables which does not provide room for sale to other ILDOs. Even with multiple Indian ILDOs participating in a single consortium cable like SMW4, IMEWE, situation of BW availability more or less remains unchanged.

6.2 What measures can be taken to encourage more ILDOs and ISPs to set up cable landing stations?

TCL Response:

As mentioned above unless until ILDO/ISP themselves participate in cable projects and invest, the BW /CLS availability status will always appear to be monopolistic. This would of course need huge financial commitment from ILDOs for which government has to devise necessary ways and means to provide necessary encouragement/incentive to participating ILDOs/ISPs. The present regulatory environment needs to be made even more operator friendly in order to attract additional investments in this field if Government expects them to invest them in submarine cable systems to meet industries ever growing BW requirement. Such participating operators need to be encouraged by way of facilitating soft loans/subsidy (as they are developing basic infrastructure for the nation as highways with in the nation built by Government) and assured good returns in investment besides quick regulatory clearances right from in principle approval to availability/issuance of various permits/clearances required to construct the cable system till its commissioning and beyond. Additionally, custom rules needs to be reviewed for submarine cable projects. There should not be any custom duty levy on the equipment imported for CLS and also on submarine cable spares (cables, repeaters, branching units etc) to be stored in India to ensure quick repair of cable when ever it gets cut in sea. For info, the cable spares are currently kept at Singapore due to levy of custom duty on storage of cable spares in India which is not the case in countries like Singapore, Philippines etc. This situation can delay the repair of cable due time taken to fetch spares from Singapore in case fault is near Indian shore. This situation needs immediate redressal.

International Bandwidth is lifeline of country's economy and with the increasing need for diversity; it is difficult for few ILDO operators to create such resilient network for country as a whole. It is not practical for few ILDOs alone to keep investing in multiple cable system to meet ever growing bandwidth requirement and desired diversity. It should be made mandatory for ILDO/ISP operators to significantly invest and participate atleast in 2 cable systems in a period of say 7 years.

So in summary

- Making it mandatory for ILDO/ISP to have investment (fully/partially) in CLS /Cable system(s) will clear the BW bottleneck and create much required international BW diversity. It will also lead to end of the perceived the “monopolistic” situation
- Encouraging and adequately compensating/rewarding the cable operators for the risk/investment they have made will create a investment friendly environment
- Suitable amendment in custom regulation to ensure storage of submarine cable/spares at Indian shore without payment of custom duty. Custom Duty to be payable only on such spares consumed in Indian territorial waters for repair of cable fault.

Internet Exchange Point

TCL Introductory Comments :

Currently there are over 160 Operational ISPs in India which are providing Internet Services to customers. Similar in line with the Internet ecosystem in other countries where Internet Industry is quite mature, India Internet industry ecosystem also has various Tier-1, Tier2 & Tier-3 ISPs depending upon size and area of operations. The Tier-1 ISPs have pan India internet backbone and are providing the Internet service to Tier-2 and Tier-3 ISPs. Tier-2 and Tier-3 ISPs have operations in specific regions and they provide further help in penetration of Internet Service by providing deeper penetration/ reachability and niche applications.

Tier-1, Tier-2, Tier-3 ISPs are connected with each other directly or indirectly. Many of these ISPs have direct private peering among themselves. Further these ISPs also have multilateral peering at NIXI. So the ISPs are today exchanging all the Domestic Internet traffic through any of these means i.e. the direct connectivity among themselves, bilateral private peerings and NIXI. Also the content players like Google etc also have direct peering with various ISPs. Since the domestic traffic is today already being exchanged domestically hence it would not be correct to say that the India domestic traffic is currently being exchanged at international locations as this is neither cost effective nor provide optimal service performance for Tier-1 ISPs themselves. Further, it would not be correct to compare the domestic traffic and international traffic percentage ratios by comparing the traffic exchanged at NIXI as the only domestic traffic being exchanged and comparing it with the deployed international backbone BW of ISPs.

As per Tata Communications, the main issue today before the internet industry in India is not that the domestic traffic is not being exchanged domestically or the BW cost is higher, however the real and main issue is that there is no enough local content available with in India in comparison to International content. Further, the cost of network roll out (access and long distance) is quite high due to issues like RoW etc. Further, in order to provide the hosting and Internet Data Centre services, the cost of building Internet Data Centers is quite high due to escalation in cost of real estate, power etc. Hence there is

need to promote the growth of local content by way of initiatives like e-governance etc and providing incentives to set up IDCs.

6.3 Do you perceive the need for effective Internet exchange point(s) in the country to efficiently route domestic IP traffic?

TCL Response:

Tata Communications does not perceive the need for setting up more Internet Exchange points (s) in the country as the domestic traffic is already being exchanged domestically via many available options like NIXI, private peering among ISPs and content providers and direct connectivity among ISPs.

Internet Peering is a voluntary interconnection of administratively separate Internet networks for the purpose of exchanging traffic between the customers of each network. Internet Exchange provide ecosystem and infrastructure to ISPs to voluntarily exchange of traffic with each other at the terms mutually agreed peering policy. . In most of the mature Internet markets, the Internet Exchanges have been successful and the Internet ecosystem has stayed fairly glued together without government intervention or regulation making it a free market and the main reason behind its success. Hence Tata Communications feels that no specific licensing framework is required to set up Internet Exchange points as Internet Exchange point does not provide Internet Service (which is provided by ISPs under ISP license) but only an ecosystem or infrastructure for ISPs to exchange traffic with each other on terms mutually agreed peering policy between the two participating ISPs.

6.4 If your answer to issue in 6.3 is in affirmative, please comment on the licensing framework of the entities for setting up Internet Exchange Points in India.

TCL Response:

Not applicable in view of response to Question No 6.3

6.5 Will it be desirable to permit those Unified licencees to setup IP exchange points in the country who have no vested interest in routing of the IP traffic?

TCL Response:

Same as response to 6.3 above.

IPv6

6.27 What measures are required to encourage the deployment and adoption of IPv6 in the country?

TCL Response:

IPv6 implementation will be complete when besides large ISPs, the small and medium SP's and enterprises also adopt IPv6. In order to encourage IPv6 adoption the Government can do the following things:

- Encourage Content Providers and Govt. organization to start participating in the various IPv6 forums that the Govt. is organizing.
- Facilitate creation of Citizen centric content that can be made available only on the IPv6 Internet. This can create an active interest among the Internet community in India and accelerate the adoption of IPv6 in India
- Govt. can provide specific significant financial incentives that can be provided only to those ISP's offering IPv6 Internet Connectivity/services
- Other countries such as US govt. are planning specific applications such as smart electric grids and emergency response systems that are being developed exclusively on IPv6. Similar e-governance, emergency response and smart grid applications leveraging the large address space of IPv6 can be planned in India. This will also develop interest among the Industry/stakeholders.

6.28 In your opinion, what should be the timeframe for migration to IPv6 in the country?

TCL Response:

Globally, it is understood IPv6 migration will be a steady & progressive transition over the next 5 – 7 years rather than time bound targets. This perspective is a practical and relevant one, given the well known fact that IPv4 and IPv6 network protocols will continue to co-exist for operational and business reasons. During this transition period, IPv6 traffic levels are expected to rise in volume as global adoption becomes more widespread and prevalent with the large/small network equipment vendors (Routers, CPE devices, LAN switches, others) , software providers (OS, Office applications et al), internet service providers, internet content providers, enterprise organizations and others ushering in the IPv6 evolution.