

Kind Attn: Shri Lav Gupta, Principal Advisor (TD), TRAI,

Dear Sir,

Following to the Open House Discussion held on 2nd February, New Delhi on TRAI on Consultation Paper on 'Issues relating to Telecommunication Infrastructure Policy'.

We humbly submit our response as under;

As per Comments on Issues for consultation

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.

The classifications suggested in this chapter are in order and we agree with the same. However, we feel that IP1 category should be permitted to operate all kinds of active infrastructure (Telecom & IT Equipment) on behalf of the Licensed Service Providers using the frequency spectrum allocated to the Licensee.

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

We have no comments to offer.

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

In our opinion, internet exchanges should be installed in each licensed service area to route the domestic internet traffic. This will enable efficient use of the available resources within the country and monitoring of the internet traffic by the security agencies. This may be also helpful to small enterprises, who will not need interconnection to the international gateways.

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.

In India, the internet exchanges are being planned and operated by NIXI. In our opinion, NIXI should also come under regulation so that the operators can be mandated for interconnection with NIXI nodes.

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?

In our opinion, it is not necessary to permit any other Unified Licensees to set up IP exchange points in the country. The objective will be met by supporting NIXI.

6.6 Please give your comments on the changes proposed in para 3.5 of Section C of Chapter 3.

We agree in agree with recommendations made already. No further comments.

6.7 What methods would you propose for reduction of the number of towers?

The number of towers in any areas depends upon the available spectrum and the traffic. In urban and sub-urban densely populated areas, there is a need to install large number of towers due to scarcity of spectrum to take care of the high traffic. In the absence of availability of higher bandwidth to each operator, it is advisable to promote Inbuilding Solutions (IBS) so that the traffic can be taken out of the Main BTSs. For this, 2 - 3 MHz spectrum may be reserved in the cellular bands for inbuilding solutions, to be used on sharing basis.

The other method suggested is the use of street furniture like electrical poles etc for installation of low power BTSs which will provide better and uniform coverage and reduce the number of high towers.

6.8 In what ways do you think that IBS can be encouraged for better in building coverage, better QoS and reduction in level of radiated power from Macro cell sites?

Inbuilding can be encouraged by :

- 1) Reserve a small spectrum of 2-3MHz in cellular band for inbuilding solutions.
- 2) Allow Infrastructure Providers / Other Service Providers to provide IBS on a shared basis to the licensed service providers.
- 3) The license fee may be much lower (say around 20Cr) on all India basis.
- 4) The spectrum usage fees may be waived off
- 5) Incentives may be considered on license fees depending upon number of operators sharing the IBS infrastructure.
- 6) Civic bodies may be advised to make it mandatory for commercial buildings like multiplexes, hotels etc. to have IBS infrastructure built in while construction.

6.9 How can sharing of IBS among service providers be encouraged? Does TRAI need to issue any guidelines in this regard?

Sharing of IBS infrastructure can be encouraged by giving incentive in form of reduced license fees depending upon the number of operators sharing the IBS infrastructure. TRAI may need to issue guidelines in respect of :

- 1) Sharing arrangement between Service Provider and IBS provider
- 2) IBS provider should provide connectivity to all cellular licensed service providers mandatorily.

3) Incentives may also be considered in the license fees to encourage the use of products indigenously designed and developed in country.

6.10 Do you agree that innovative technologies such as 'Distributed Antenna System' (DAS) can be effectively utilised to reduce number of towers and migrate towards tower-less cities?

Yes, the use of Distributed Antenna System (DAS) should be encouraged to reduce number of towers as indicated in Question 6.7. The use of DAS may be encouraged on shared basis to avoid multiple infrastructures built up on the street. However, the use of DAS cannot completely eliminate the use of towers.

6.11 What is the impediment in adoption of new technologies such as DAS and how can these be removed?

1. Since the street furniture are owned and maintained by different organizations like Electric Supply Undertakings, Corporations/Civic bodies, Owners of Private and Government buildings, etc., coordination is required with all these agencies which could delay the projects. Government may have to issue regulatory guidelines for sharing such infrastructure like poles, roads, buildings etc.
2. Sharing of such DAS infrastructure should be made mandatory.
3. Power supply to each antenna system of DAS is an issue, which requires power supply line to be laid along with the cables. However, higher maintenance is required for such power cables.

6.12 Would you agree that the design of towers can and should be standardised?

Yes, we agree

6.13 If yes, how many different types of towers need to be standardised?

It is suggested that the standardization may be done for limited types of towers say 3 types for roof top towers and three for ground based towers. This will also lower the price of towers.

6.14 What are the important specifications that need to be included in these standards?

In our opinion, the important specifications are :

- a) Height
- b) No. of antennas to be installed on the towers
- c) Wind load

6.15 Which is the best Agency to standardise the tower design?

No Comments

6.16 What is the likely cost of camouflaging the towers?

The cost of camouflaging of towers depends upon site to site and may be upto Rs. 50,000.

6.17 Can camouflaging be made mandatory? If so, can this be made part of the design standards of the towers?

Camouflaging can be made mandatory. However in our opinion, it may not be feasible to standardize a design which will be based on site to site.

6.18 Do you consider that the existing framework of different civic authorities to grant permission for telecom towers is adequate and supportive for growth of telecom infrastructure?

The civic bodies should have a transparent procedure for granting the permission for installation of telecom towers.

6.19 Is there a need to set-up a single agency for approval and certification of towers? Is there an existing agency that can do this work? If a new agency is proposed, what should be its composition and framework?

The certification of towers meeting the standards should be obtained from any authorized structural engineering entity like SERC etc. and approval for installation of such towers may need to be granted by the Civic Authorities as per their specified norms.

6.20 Is it feasible to have a uniform framework of guidelines including registration charges, time frame, single window clearance etc for granting permission for installation of telecom towers and laying of optical fibre cables? If so, can it be prescribed by the Licensor or the Regulator?

For installation of telecom towers, the permission is to be granted by the Civic Authorities of the state. However, they should have clear transparent policy laid down to avoid any delays.

With regard to the laying optical fibre cables, it is advisable that the civic bodies get the ducts laid for the use of various service providers so that service providers need not lay the cables individually.

6.21 What can be an appropriate time frame for grant of permission for erection of towers?

It is suggested that not more than 30 days time frame for granting permission for erection of towers to avoid the delays in the project.

6.22 How can a level playing field be ensured for telecom service providers vis-à-vis other utility service providers especially in reference to tower erection?

No Comments.

6.23 Which agency is best suited to inspect the buildings and certify the structural strength of the buildings in case of roof based towers?

Civic bodies of the state may be best suited to verify the structure of the building (based on the Structural Engineer's certificate) for erection of roof top towers.

6.24 Should sharing of mobile towers be mandated?
Infrastructure sharing should be made mandatory.

6.25 Should sharing of active infrastructure, created by themselves or infrastructure providers, be allowed?

To reduce capex & opex of the service provider and the resultant benefits to subscribers, sharing of active infrastructure should be permitted.

Use of USO for rural areas

6.26 Please comment on the issues raised in paragraph 5.6 of Section A of Chapter 5.

We agree with the points raised in this chapter of the consultation paper.

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

No comments

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

No comments

IPTV

6.29 What measures do you suggest to enhance provision of IPTV services by various service providers?

No comments

6.30 Should there be any restriction on ISPs for providing IPTV services?

In our opinion, no such restrictions should be imposed on ISPs for providing IPTV services.

6.31 Please give your comments on any related matter not covered above.

To meet the government's objective of National Broadband Plan, in addition to the existing bands, about 150 MHz in 3 GHz (2900-3050 MHz) and about 200 MHz in 5 GHz (5070-5150 MHz) bands may be de-licensed.

Thanking you,

With regards

Anil Prakash

President

Telecom Users Group of India