TRAI CONSULTATION PAPER ON ISSUES RELATED TO TELECOMMUNICATIONS INFRASTRUCTURE POLICY

RCOM RESPONSE TO THE TRAI

OVERVIEW OF TELECOM INFRASTRUCTURE

Telecom Services form an essential component for execution of Disaster Management and are an inescapable need today for medical emergencies, policing functions and daily life needs. Rollout of Telecom infrastructure in a time bound manner is important to meet the society needs.

Telecom infrastructure services provided by IP-1 service providers needs to be classified as essential services (as in turn these services are being utilized by Licenced Telecom Service Providers) and government of India should notify legislation for achieving the common cause of building national telecom infrastructure and extending the benefit of exemption of statutory levies like municipal taxes / octroi / property taxes etc for establishment of telecom infrastructure and associated material / equipment and operations thereof.

UTILITY POWER CONNECTION PRIORITY AND TARIFF:

Currently the Tariff category for the power connection to Telecom towers is treated as a "commercial establishment" and thus highest Tariff is applied to Telecom site infrastructure. The Telecom services should be treated as a "Public Utility Service" and the Tariff structure of industrial category shall be made applicable" to all the telecom towers across all states. The state electricity boards shall be advised to process the utility connection applications from Telecom Infrastructure service provider on priority and treat the connection as Industrial connection. Till, **DoT takes up the matter with the respective Electricity Regulators and a decision is received; the electricity connection priority and Industrial Tariff for Rural areas should be enforced through immediate intervention of DoT with Ministry of Power and Regulating Body (CERC).**

FUEL SUBSIDY:

One of the major problems faced in the rural areas is the non availability of reliable grid power. In the absence of reliable grid power, Telecom Infrastructure service providers are forced to extend the power to the sites through Diesel Generator Sets for most of the time. The operational costs of these sites are about 200% more than the normal ones where grid power availability is normal; which translates in to @ Rs. 5 lacs additional cost

per site per year, which is a waste of precious foreign exchange in terms of import of fuel. Covering such rural areas is not feasible for the Telecom operators due to exorbitant fuel cost associated with DG set operation. **Hence it is requested to introduce fuel subsidies (through USO funds or any other alternative mechanism as may be deemed appropriate e.g. differential tax structure/tax relief etc)) to the Telecom Infrastructure service provider to provide Telecom services to such areas, till the Electricity Board connections become available at Industrial Tariffs.**

TAX HOLIDAYS AND OTHER CONCESSIONS FOR INFRASTRUCTURE PROVIDER

Besides various difficulties being faced at the local level, there is an additional problem of imposing very high taxes/fees for setting up of mobile towers. Some of the incidence of high charges are given below:

- In Delhi, MCD charges Rs 1 Lakh per tower and NDMC charges Rs 2 lakh per tower towards one time registration fee;
- The Registration charges for setting up of tower are very high in Maharashtra. The Nagpur municipality charges are Rs 3 lakh per tower and Aurangabad municipality charges Rs 3 lakh per tower as registration charges. The NASIK municipality charges Rs 2.5 lakh per tower as registration charges.
- The Haryana government Municipal Committee setting up of one time registration charge of Rs 2 lakh for each tower in high potential zone and Rs. 1.5 lakh. For Medium Potential zone. In case tower is shared then an additional Rs 1 lakh per operator shall be payable in high potential zone and Rs. 75,000 per operator for medium potential zone

These incidences of high taxes/fees are increasing. These taxes/levies are increasing cost of setting up of towers and may impact overall business model for rolling out of network especially in rural and remote areas which still significantly remain uncovered.

In view of the above it is requested that the Authority may consider to issue necessary guidelines/legislative amendments so that unnecessary instances of imposition of taxes could be avoided.

GRANT OF INCENTIVES FOR DEPLOYING ALTERNATE ENERGY TECHNOLOGIES

The mobile industry in India is going to continue its expansion plans and it is the need of the hour that this growth needs to factor in the need for reducing its carbon footprint. Indian mobile operators and equipment vendors are working on a number of initiatives to develop energy efficient networks by designing and deploying low energy BTS's that are powered by renewable energy. Cell sites account for most of the energy consumed by our mobile networks, however, these are dependent on diesel generators power for sustained operations. Current situation in India as a country:

- Approx. 2 billion litres diesel per year for cell sites
- All sites (rural + urban) require autonomous power (i.e., a diesel generator)
- "118,000 renewable energy base stations could save up to 2.5 billion litres of diesel a year and cut annual carbon emissions by up to 6.3 million tons."

The Industry has taken number of initiatives to address the environmental concerns. Alternative sources of energy are being deployed wherever found feasible. Feasibility is also being studied for deployment of bio fuels. Service providers are using green shelters or deploring outdoor BTS wherever found feasible to reduce the power consumption. Currently operators are experimenting with use of Non-Conventional sources of energy (solar, wind , fuel cells) wherever feasible for meeting the energy requirements. We have already deployed fuel cells based BTS's and these have the potential to reduce the carbon footprint significantly, and increase energy efficiency of new network equipment and optimize network technology to increase energy efficiency. While we are confident of the technical feasibility, it is evident that financial viability for solar/ solar-wind/ fuel cell hybrid renewable energy systems in shared mobile infrastructure sites in rural/remote areas will need to be supported by government incentives.

The service providers are aware and recognize the importance of reducing carbon footprint and improving energy efficiency. The initiatives of the Indian mobile industry to reduce its direct emissions rely on the development of an enabling regulatory and subsidy framework and the creation of tax and subsidy incentives to support the business case.

As has been explained earlier, the high usage of number of Diesel Generator Sets are causing very high carbon emission and high usage of Diesel in addition to exorbitant cost of operation of the sites. With more and more sites getting added to the network it is imperative to start using non conventional energy sources (such as fuel cells, hybrid fuels, bio-diesel, solar etc) for Telecom sites. However the present cost of using such technologies based on Solar, Wind and fuel cell etc is prohibitively expensive and the payback period for such investment is ranging from 6 to 10 years. Hence we believe that **if the Authority considers the incentives schemes , then the investment in alternative energy sources can be accelerated. The Consideration by the authority could be in the form of tax rebates, capex subsidies, and availability of USO funds for investment in alternate energy technologies. Certain percentage of towers must be supported with 100% subsidy under various schemes for using non-conventional energy. The support should increase over the years so that all towers are setup for non-conventional energy where grid power is not available or it is not very reliable.**

SIMPLIFICATION OF SACFA PROCEDURES

Existing SACFA procedures are cumbersome. Separate permissions are required for each and every antennae on a tower. This is not consistent with the international best practices. It is suggested that **SACFA permission should not be mandated for:**

- **Towers within 7 KMs distance of Airport.**
- **For addition/removal of antenna, repeat clearance should not be required.**

SIMPLIFICATION OF TOWER CLEARANCE BY STATE GOVERNMENTS AND LOCAL BODIES

State Government / local bodies clearance should not be necessary while setting up infrastructure on private land or private roof top. However, presently multiple local body permissions are required which delay setting up of towers and rollout of services.

In addition support from state government support is required for issues of Guidelines for providing priority for:

- **Allocation of govt. land at institutionalized rates for tower installation**
- **Provision of Electricity connection on priority at normal rates.**
- **Land use conversion from agricultural to non agricultural for tower installation in urban areas and eliminate such requirement in rural areas**

AWARENESS ABOUT EMF RADIATION

At times, it is difficult to acquire suitably located site inadequate and there is lack of knowledge about health hazards/radiation issues, Government should carry out awareness campaign on print and electronic media to suitably educate the people.

Our comments on specific issues raised in the consultation paper are given below:

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.

We generally agree with the network elements given in the consultation paper. Few additional network elements are also given below which are critical for telecom networks:

Access Network

Business support systems
Operation Support System
Network Monitoring System
Disaster Recover
Service delivery Platform for VAS

IP Access Networks

Data Centres
Digital Subscriber Line Access Multiplexers
Metro Ethernet Access Platfor
HFC consisting of optical nodes
Xpon

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

Number of Cable landing stations depend on number of international cables in the country. There are 3-4 India bound new submarine cables expected in India and correspondingly new cable Landing Stations will come up in India. In case of consortium cable, number of Cable Landing stations in a country are generally decided at the stage number of investment planning and finalization of Construction and maintenance Agreement. It is technically and economically not viable to setup new landing stations.

The process of regulatory clearances is cumbersome for setting up of Cable Landing Station which should be simplified. At present Multi Department clearances from MHA, Defence, Environment etc are needed which takes upto 2 years time cycle. The process can be simplified through single window clearances by an inter-ministerial committee.

The TRAI can help ILDOs / ISPs by reviewing the access facilitation charges being charged by incumbent ILD operators. The TRAI had issued regulation on "Access to essential facilities at cable landing station" and rates decided in 2007. Subsequently utilization has increased many fold which requires immediate review of access charges. Internationally access charges are within the range of 5% of international bandwidth cost but presently in India these are more than 50% of the bandwidth charges. Cable Landing Station Access charges have not been not reviewed since 2007. The charges being levied by the incumbent operator are exorbitantly high and there is an urgent need to revise these charges. It is requested TRAI should review charges every year, henceforth.

INTERNET EXCHANGE POINT

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

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

Number of NIXI nodes and interconnectivity efficiency is linked to QoS, QoE, SLA requirements. Operators have within their own network several points to collect and disseminate the traffic and additionally doing that at NIXI level is not required. **There is no requirement for additional internet exchange points** as the traffic does not support viable investment for additional points and existing internet points are sufficient to meet the QoS, QoE and SLA requirements.

EXCHANGE POINTS IN INDIA.

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

Setting up of IP exchange points by a Unified Access Providers depend on the business case. At present there is no business case for setting up of new IP exchange points.

MOBILE VIRTUAL NETWORK OPERATOR

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

As per Para 3.5 C, the Authority has contemplated that unified licensee without spectrum allotment should be allowed to become MVNOs to operate under the proposed new license.

We agree with the Authority as that will facilitate existing licensees to become MVNO for 3G services in case they do not have spectrum. Similarly operators waiting for allocation of initial 2G spectrum may also become MVNO linked to other MNO.

The proposed recommendations will help increase in competition in the telecom sector and consumers will benefit through seamless services even in areas not covered by their service providers.

We also welcome the Authority's recommendation on allowing MVNO for using spectrum held by MNO and set up its infrastructure using Radio Access network , Base station subsystem etc.

IN- BUILDING SOLUTIONS

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

We recommend following suggestions for reduction of towers:

- New tower set up should not be allowed within 1Km for urban area and 2Kms for rural area, unless existing tower has reached tenancy of 2 in urban area and 3 in rural areas.

- Sharing of in-building solutions should be mandated by TRAI.
- Use of all existing structures (like power towers, chimneys, water tanks etc) need to be explored for wireless coverage, and local agencies/govt bodies should approve use of such structures.
- In case of multiple towers currently operational within 50 mts radius, operators should be encouraged to collapse their sites into 1 tower.
- Use of wall mounted street level antennas in all cases.

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?

Following are suggestions to encourage IBS:

- Complicated ROW procedures associated with high costs limit use of In-building solutions. Simpliefied RoW procedures may facilitate intra-city rollout of fiber network and improved use of IBS;

- ROW levies/fees should be set up at restoration value basis.

- There are incidences when rights of entry are given to certain telecom operators only by builder / resident association. In such cases, sharing of IBS solutions needs to be mandated

- The Government should accept TRAI recommendation dated 19th March 2009 on introduction of additional clause in section 10 of ITA, 1885 so as to mandate ROW permission within 90 days by the local authorities.

- Multi Operator Multi Technology IBS solution are also important for large public places like airport, metros tunnels and stations, large shopping areas etc. The Authority may consider to regulate terms for setting up and sharing up of such facilities so that access to IBS is available on reasonable terms.

6.9 How can sharing of IBS among service providers be encouraged?

- For all existing IBS sites make sharing mandatory. This will enhance in-building coverage for all operators and also reduce towers.

- Use of wideband antennas with multitechnology combiners to help maintain aesthetics inside the buildings.

- Encourage 3rd party operators to build IBS for sharing with all operators.

- Macro sites power can be optimised to ensure low radiation impact and interference.

- All govt buildings, public places etc should be made available for common IBS deployment to use by all operators.

6.10 Does TRAI need to issue any guidelines in this regard?

There are incidences when rights of entry are given to certain telecom operators only by builder / resident association. In such cases, sharing of IBS solutions needs to be mandated. **TRAI is requested to make appropriate recommendations to the DoT to make IBS sharing mandatory.** TRAI will need to take up the case till the recommendations in this regard are implemented.

DISTRIBUTED ANTENNAE SYSTEMS

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?

DAS is a good solution to provide indoor coverage in high traffic areas like public places, stadiums, shopping malls etc. However it cannot be deployed across a city considering prohibitive costs and RoW charges for laying cable.

It should not be treated as a solution to reduce number of towers, but is a solution for hotspots where signal penetration is low. Therefore, we do not agree that DAS can be effectively used to reduce number of towers.

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

DAS enhance overall coverage and capacity especially at locations where the potential for increase in data usage is evident. DAS also reduces number of towers and improves visual impact. However, deployment of IBS largely depends on QoS, QoE and SLA requirements.

Some of the impediments in adoption of DAS are as under:

i. Non-availability of Fiber connectivity to every nook & corner in cities/urban areas for back-haul.

ii. RoW permission for laying FTTB (Fibre-to-the-building) for backhaul.

iii. No guidelines have been framed by electricity companies or boards for leasing out of poles .

iv. Cost of DAS is high, and not business viable.

v. Technical challenges to deploy multi-technology, multi-operator & multi-band DAS.

vi. Permission to deploy DAS in govt & public places etc are difficult to get.

We feel that service providers should not be mandated to deploy these technologies as market forces should prevail for taking such decisions. Regulator should only be concerned with the QoS, QoE requirements and how and what network architecture is deployed should be left to be decided by service providers.

STANDARDIZATION OF TOWER DESIGN

6.12 Would you agree that the design of towers can and should be standardised?
6.13 If yes, how many different types of towers need to be standardised?
6.14 What are the important specifications that need to be included in these standards?

The telecom industry has followed self-regulation in design of towers. The existing framework for the tower design is working well as it has improved infrastructure sharing and reduced Capex and Opex for the operators. Customer has benefitted from the current framework as de-regulation has helped substantial; reduction of tariffs. We believe tower design should be left for service providers and IP operators to decide. Considering diverse geographies, we believe that the existing framework of self regulation is adequate and allowed to be continued.

it is therefore suggested that design of tower should not be standardized.

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

We firmly believe that tower design should not be standardized. In case Authority believes that standardization is a must then Bureau of Indian Standards, TEC, SERC, CPRI and IIT are competent agencies to standardize the tower design. Bureau of Indian Standards and TEC also have requisite statutory Authority to specify standards.

REDUCING VISUAL IMPACT OF TOWERS

6.16 What is the likely cost of camouflaging the towers?

"Camouflaging" for towers is not a standard term and would depend on the location of site. Generally "camouflaging" is desirable in important areas like historical site and its cost would vary from location to location depending on the aesthetic requirements. It is therefore not possible to give the cost details.

The camouflaging may be prescribed only if those are considered necessary for certain aesthetic purposes in areas of heritage, environmental or architectural importance.

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

While we feel that the aesthetic needs to be addressed but at the same time it should not be mandated due to very high cost and differing views of appropriate camouflaging requirement.

There are over 3,20,000 existing towers and estimated requirement of additional 1,36,000 to 2,20,000 new towers by 2014. It must be recognized that there would be exorbitant cost involved in camouflaging which will ultimately be passed on to consumers.

CLEARANCES FROM LOCAL AUTHORITIES

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?

Various issues related to setting up of towers is becoming a matter of growing concern for the industry as various civic authorities and agencies are applying ad hoc and arbitrary terms and conditions that are difficult to adopt and implement

There is no uniform approval process across the States, for the tower construction in different states/local bodies in India and hence different agencies follow different approval procedures. There are innumerable conditions being imposed which is making it almost impossible to obtain timely approvals. Some of requirements which are difficult to meet are highlighted below:

- No objection from local RWA for tower clearance which is rarely possible;
- No towers in residential areas; the telecom towers to be installed only in parks, green area, and agricultural area.
- Acquisition of minimum area of 30X30 feet for GBT/RTT towers
- Minimum 30 feet wide road for installation of new towers in open places/buildings
- Towers cannot be Installed on Schools, Hospital & Dispensaries
- Very high charges for tower setting registration/clearance

Most ad-hoc and arbitrary conditions imposed by local Authorities is a result of misplaced apprehension of civic authorities with regard to radiations emitted by the Towers and their budgetary requirements. Most civic bodies are using this excuse to charge exorbitantly from operators to meet their budgetary deficits.

There is a need to standardise various terms and conditions for tower setting under the purview of a National Telecom Infrastructure Policy (NTIP).

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?

There should be a single umbrella body constituted by the Central Government having a single window clearance system. Permissions would be obtained from such single body instead of several bodies. Also required is an Automatic Approval System (AAS) when certain norms as laid down are conformed / met.

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?

Local Municipal or Developmental Authorities do not have due legislative authority to issue such directions or frame guidelines or impose such permission charges per cell site/Tower A. Mobile Towers fall under the definition of "Telegraph" as used in Entry 31 of List I of 7th Schedule (Union List) and the Central Government has the exclusive legislative competence to deal with any matter relating to the same.

The Entry 31 covers the entire field in relation to "Telegraphs" including erection/installation, maintenance and operation and when read with Entry 96 of the same List it covers any fee payable in that respect. The relevant provisions are reproduced below:

Union List of Schedule Seven of Constitution of India:-

Entry 31 of List-I -

"Posts and telegraphs; telephones, wireless, broadcasting and other like forms of communication."

Entry 96 of List-I reads as under:-

"Fees in respect of any of the matters in this List, but not including fees taken in any court."

It is clear from the above that telecommunication is a Central subject and Central Government is exclusively empowered to legislate thereon.

The exclusive authority to give permission for installation and regulate the erection & operation of such telegraphs is vested exclusively with the Central Govt. under Section 4 of the Indian Telegraph Act. These telegraphs are required to be erected in accordance with the National Telecom Policy devised and implemented by the Central Government and licenses granted by the Central Government under the aforesaid provision of the Indian Telegraph Act. These are not matter of local self Government or Municipal Departments, but are matters liable to be governed by the Central Govt. and/or Regulatory Authority constituted by it in accordance with the National Telecom Policy of the Govt. of India. These are not matters to be determined by Municipal Authorities under the provisions of the respective Municipal Corporation Acts at all and as such the policies of the local Municipal or Developmental Authorities in this respect are beyond their lawful jurisdiction and authority.

Therefore we believe that the framework / guidelines issued by the central government should be uniformly followed by the state governments and the local municipal bodies

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

Permission for erecting tower should be granted within 90 days.

Section 12 of the Indian Telegraph Act, 1885 provides that any permission by the local authority for telegraph lines or posts may be provided on reasonable conditions. The reasonable condition includes reasonable timeframe to process NOC applications for tower setting. Therefore it is statutory duty of the local authorities to provide NOCs in the reasonable time frame. The central government should lay down guidelines for granting permissions with the specified time period.

The Federal Communication Commission, USA recent declaratory ruling dated 18.11.2009 where they have established timeframes of 90 days for collocations and 150 days for all other tower siting applications reviewed by state and local governments. FCC found that while most state and local jurisdictions currently process tower siting applications in a timely fashion but there were many instances of unnecessary delays. Congress specifically requires that state and local authorities act "within a reasonable period of time" on requests for tower siting. The FCC decision achieves a balance by defining reasonable and achievable timeframes for State and local governments to act on zoning applications while not dictating any substantive outcome on any particular case or otherwise limiting State and local governments' fundamental authority over local land use.

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?

Creation of telecom infrastructure should be considered at par with the other infrastructure sectors, especially power sector where ad-hoc and arbitrary conditions mentioned above have not been specified. Approval for laying of power cables, erecting of poles or towers etc are much easier compared to the telecom sector. Telecom sector is one of single largest contributor to the GDP and should be provided facilities for easier setting up and expansion of networks so that the growth momentum could be maintained.

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?

No single agency can certify the strength of the building in case of roof based towers. Qualified engineers from one of the following institutions and other equivalent institutions are suited for certifying safety of buildings:

(i) Indian Institution of Technology, Delhi
(ii) Central Building Research Institute, Roorkee
(iii) All India Technical and Economical Service, Delhi
(iv) National Councils for Building Material, Fardabad.

In addition to the above all existing agencies authorised by central, state and local authorities to certify security of buildings should continue

INFRASTRUCTURE SHARING

6.24 Should sharing of mobile towers be mandated?
&
6.25 Should sharing of active infrastructure, created by themselves or infrastructure providers, be allowed?

Tower sharing is desirable but should <u>not</u> be mandated. Given the already existing competitive environment and benefits of sharing well understood, we believe market forces are already taking taking tower sharing into account and also reaping benefit from it.

The Indian cellular mobile service providers are creating infrastructure on their own or through partnership with equipment manufacturers. Mobile operators are able to optimize cost and capital efficiency through sharing of passive and active infrastructure. It results in a capital expenditure saving for the mobile services sector as a whole.

Considering environmental and visual benefits of tower sharing, the Government should also encourage tower sharing by providing certain incentives like availability of utility power connections on priority and concessional basis.

Infrastructure sharing may only be mandated in <u>Critical locations</u> like Lutyens Bunglow Zone (LBZ), Cantonment areas, Central Government and State Government office buildings, Designated Forest/ Green Belt areas and Government Residential colonies, etc., where installation of cell sites by individual operators is either difficult or is not permissible due to lack of policy/ security / aesthetic concerns.

USE OF USO FOR RURAL AREAS

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

It is objective of the Government to provide access to all people for telecom services at affordable and reasonable prices. Service providers should be provided subsidies for proving accessibility and affordable services in rural areas. The TRAI recommendations on "An Approach to Rural Telephony-Suggested Measures for an Accelerated Growth" are still relevant.

There is a no need for a National or State level Fiber Agency in Public sector for the creation of optical fiber networks. Number of existing service providers are already making efforts to lay optical fiber cables as per business viability and it is much cheaper to use existing infrastructure. Use USOF to improve business viability of service providers laying fiber in small villages. Instead of creating NOFA and SOFA guidelines can be establish for leasing of OFC asset created using USO Fund to other service providers on demand at a predetermined rate prescribed by the Government / Regulator

USO Fund should be mainly committed for creating wireless mobile and broadband infrastructure and industry supports the contribution from USO Fund to ensure the connectivity to rural panchayats, primary health centres, schools and hinterland society. Therefore TRAI recommendations are still relevant.

In addition we have following suggestions for improving rural communication:

- OFC connectivity is available up to DHQs and most of SDCAs. USOF should give subsidy for linking Block Head Quarters and Gram Panchayats to any service provider who wants to lay OFC beyond SDCAs.
- To encourage speedy penetration of mobile services in rural areas, DoT should accept the roll out obligations proposal as recommended by TRAI in May, 2010.
- DoT should consider 2% reduction in USOF contribution in case a TSP covers 75% of the Block Head Quarters.
- To leverage existing technology options and infrastructure available in rural areas and to promote broadband the definition of broadband should be kept at 256KBPs

IPV6

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

With the start up of 3G services, there will be a demand for smart phones , I pads, tablet PCs etc – due to availability of high speed broadband. Hence it is essential that the deployment of IPV6 addresses is encouraged by the Govt. The adoption on IPV6 can be encouraged through following measures:

- The Govt should set up an example by notifying usage of IPv6 in the platforms/applications pertaining to e governance and IPV6 compatibility in its own procurement of IT system and networks.
- The Task force created by the Govt to increase the awareness of exhaustion of IPV4 and impact of IPV6 on internet/ broadband services, needs to have regular programmes to inculcate the migration process.
- Compliance from all the service providers can be taken for network readiness.

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

TEC has prepared the "National IPv6 Deployment Roadmap", which examines the different issues related to the deployment of IPv6 in India. Number of task forces have been created under the "National IPv6 Deployment Roadmap" which are working on on the migration to IPv6.

We support TEC in its endeavor for the migration from IPV4 to IPV6. All service providers should be ready with IPV6 implementation by December, 2011.

IPTV

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

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

Generally there should not be any restriction on ISPs for providing IPTV services.

In order to ensure only serious players, the current guidelines for minimum Networth requirement of Rs 100 Crores for ISPs are correct. We are of the view that the Net worth requirement should be maintained for ISPs.

GENERAL

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

Please refer our comments in the beginning.