Telecom Regulatory Authority of India
Consultation Paper on Issues related to Telecommunications Infrastructure policy
Jan 14, 2011

Comments from SBI Capital Markets Limited (SBICAP)

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.
SBICAP: In agreement with the classification of the Infrastructure elements as described in the Consultation paper. The represented classification with sub-classification under each head sufficiently addresses all components of Telecommunication Infrastructure.

6.2 What measures can be taken to encourage more ILDOs and ISPs to set up cable landing stations?
SBICAP: Not commented on the subject matter.

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?
SBICAP: In view of robust growth trend of domestic IP traffic and consequent need for optimal traffic management, we perceive that development of a responsive and effective IXPs system needs to be undertaken by involving private parties.

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.
SBICAP:
- *IXP service providers shall be regulated by TRAI*
- *UASL Licenses without spectrum/ IXP license/IP-1 with increased scope could be offered to private parties on the basis of auction/bidding route*
- *Eligibility conditions could include financial as well as relevant tech experience*
- *Companies having direct influence on IP traffic viz. ISPs, Integrated players etc may not be considered eligible*
- *Tariff framework, Traffic handing capability and IXP rollout obligations could be specified in licensing conditions*
- *Since the facility development could be capital intensive, restriction on slots/mandatory sharing could be considered*

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

SBICAP: Impartial traffic management is the essence of IXP system. Regularly monitoring the impartiality of Unified licensees (especially with spectrum) may not be manageable, considering dynamic nature of the traffic. IP-1s/Companies with related expertise may be the suited for setting up IP exchange points.

Mobile Virtual Network Operator

6.6 Please give your comments on the changes proposed in para 3.5 of Section C of Chapter 3. Consultation Paper on Issues related to Telecommunications Infrastructure policy

SBICAP: MVNOs vis-à-vis MNOs bring complementary capabilities in the telecom services space. TRAI's view on provisioning of MVNO services under the ambit of UASL (without spectrum) is well appreciated. However, classic MVNO model has inherent dependency of MVNO on MNO's telecom network rollout. In view of foregoing, fulfillment of all extant obligations of UASL viz. rollout obligations etc may not be possible for MVNO to fulfill.

In- Building Solutions

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

*SBICAP: Besides the other measures bought out in the paper, an authority broadly mandated to ensure structured rollout of telecom towers could be formed. Such authority could work on areas like city/town level rollout requirement mapping, sharing framework for optimal utiliz*ation (wherever required).

Such authority could identify potential cell sites and provide to telcos/Infra providers on auction/bid basis with a condition to provide sharing facility to telcos on non-discriminatory basis.

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

SBICAP:

- *Shared IBS infrastructure provisioning could be made mandatory for all commercial buildings/hi-rise residential spaces to avoid re-work due to multiple telco setups*
- *IBS provisioning could be facilitated in upcoming buildings by way of regulation or awareness to achieve efficiencies at the inception stage itself*

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

SBICAP: Please refer our comment under 6.8. Considering the origination and termination of majority of traffic in the buildings, TRAI could consider issue of guidelines on IBS.

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?

SBICAP: With a robust intra city fiber backbone (as recommended in NBP 2010), DAS can be effectively used to reduce dependence on towers.

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

SBICAP: The biggest impediments to DAS are lack of a robust and dense intracity fiber network and non-standard/complicated RoW procedures.

Solution for such issues is to foster development of open access intra city fiber network (as recommended in NBP 2010) at a cost which makes provisioning of such services financially and technically viable.

Standardization of Tower Design

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

SBICAP: In agreement with the statement. The standardization of the design of towers can certainly be done. Even now, approvals of design are taken from various organizations and the towers are erected in accordance with the same i.e. certain specifications are followed as suggested by such organizations. However this results in non-uniformity of the tower designs. The standardization of design of towers shall bring in uniformity in design, which shall result in better aesthetics and shall more importantly adhere to safety norms.

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

SBICAP: Both the Ground Based and Roof Top towers need to be standardized.

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

SBICAP: Important specifications for the standards may include, the material (type of steel) to be used, the design of the towers, soil testing, safety requirements, height, permissible load bearing capability.

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

SBICAP: Services of Institutes like IITs can be utilized to standardize the tower design.

Reducing Visual Impact of Towers

6.16 What is the likely cost of camouflaging the towers?

SBICAP: Not commented on the subject matter.

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

SBICAP: The same may be encouraged, however making the same mandatory shall increase the construction cost of the towers and shall put undue pressure on the Passive Telecom Infrastructure Service providers as already the average tenancy in India is at a low level of 1.55x. This may result in higher tower rentals and shall pressurize the margins of MNOs. The camouflaging of towers may be made mandatory at a future date, when the tenancy levels are

higher and the same is economically viable for the service providers. In case it is made mandatory at present, it is suggested that TowersCos be incentivized for the same.
Also, it may be considered making it mandatory at metros/urban areas/Central business districts etc.

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?

SBICAP: Extant approval system is highly non-standard and complicated leading to actions of local authorities which at times may not be adequate/supportive for growth of telecom infra.

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?

SBICAP: In view of rapid growth of telecom tower infra across the country, there is a need to set-up a separate state level agency for approval and certification. A separate national agency could formulate standard procedures, guidelines and systems for the same.

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?

SBICAP: It may be feasible to implement the broader framework of central guidelines on pan-India basis. However, due to specific state level issues, the guidelines may need to be customized as per local conditions.
Regulator should prescribe such guidelines at national level but should be left for implementation and state level.

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

SBICAP: At present the total time taken by a TowerCo for erecting a tower from the day of receipt of the order varies between 2 to 3 months for a Ground Based Towers and is slightly lower for Roof Top Towers. The same includes the time frame for grant of permission of erecting of towers which generally takes around a month. The same may be reduced to 2 to 3 weeks which shall ensure quicker turn around.

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?

SBICAP: Uncommented

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?

SBICAP: Inspection and Certification of the structural strength of the buildings in case of Roof Based Towers may be assigned to the structural department of the respective municipal corporations. Expertise of Central Building research Institute (CBRI) may be utilised for arriving at a suitable framework for inspection and certification of the buildings for the purpose of installing Roof Top Towers.

Infrastructure sharing

6.24 Should sharing of mobile towers be mandated?

SBICAP: Yes

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

SBICAP: Yes

Use of USO for rural areas

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

SBICAP

- *TRAI's views on utilization of USO fund for growth of telephony and broadband services in rural areas are appreciated. Formation of national and state level agencies (funded by USO fund and Govt. guaranteed debt) is recommended to provide open access national level fiber network upto village level.*

   Participation of private sector operators in the development of open access national level fiber network as per NBP 2010 could be explored under PPP framework. The guidelines for PPP framework could be developed by TRAI. The execution risk may be diversified by awarding discrete PPP contracts in various telecom circles.

   This would give GoI an option to especially focus on the broadband/telecom growth in rural areas, which may not attract significant interest from private sector.

- *We recommend that for rapid expansion of broadband services in rural areas which are under-served at present, alternative technologies viz. satellite broadband may also be explored. Some of the salient features of satellite broadband are*
   - *Satellite broadband rollout as well as service cost is agnostic of terrain/type of area (remote/rural/urban etc) and could require lesser O&M expenses in comparison of other technologies. Also, it would obviate the costs and difficulties of laying fiber infra in remote/difficult terrain areas*
   - *Satellite broadband can be viable even in extremely thinly populated villages provided at the overall level subscriber base is adequate*
   - *Satellite broadband services are controlled at hub level and thus do not require deployment of trained manpower in far-flung areas for supporting network operations*

USO fund may be utilized to support satellite broadband connectivity way of directed subsidies at service providers/subscriber level in remote villages/underserved areas, where provisioning of services by other technologies may not be feasible.

IPV6

6.27 What measures are required to encourage the deployment and adoption of IPv6 in the country?
SBICAP: Not commented on the subject matter.

6.28 In your opinion, what should be the timeframe for migration to IPv6 in the country?
SBICAP: Not commented on the subject matter.

IPTV

6.29 What measures do you suggest to enhance provision of IPTV services by various service providers?
SBICAP: The restrictions pertaining to the provisioning of IPTV by service providers other telecom service provider should be removed.

6.30 Should there be any restriction on ISPs for providing IPTV services?
SBICAP: The current restrictions on ISPs have negative impact on their profitability and therefore the restrictions pertaining to the provisioning of Value Added Services (IPTV and others) should be removed. This shall provide more services through a single connection and shall eventually result in higher broadband penetration. Also the same shall result in efficient usage of the bandwidth.

General

6.31 Please give your comments on any related matter not covered above.
SBICAP:
Tower Infrastructure: USO Fund to incentivize/make mandatory the roll out of Ground Based Towers in rural areas (where telecom penetration levels are very low. The same would ensure higher tenancy levels and hence foster competition. Also, it would hinder cluttering in rural areas .Internet Service Providers: Telcos/ ISPs/ NLDs laying fibre in rural areas should be incentivized from USO Fund. The same will expedite broadband roll out in the country.