



**Response**  
**to the Consultation Paper dated 27<sup>th</sup> January, 2009 on**  
**Licensing Issues relating to Next Generation Networks**



**Issue: 1.1 for Consultation:**

**In view of emergence of NGN and technological innovation, do you perceive the need for change in present licensing and regulatory framework? If so, elaborate the changes required in existing licensing and regulatory framework? Give your suggestion with justifications. (refer para 4.10.16)**

**Response: 1.1**

ISP's should be permitted to interconnect with PSTN/PLMN within India. The termination or switch within licensing area should not be mandatory for routing traffic. The regulatory framework needs to be technology neutral.

This is imperative for the growth and viability of ISPs' and for Indian telecom market at large. Some of the benefits from such a move are listed below:

- Facilitate increased penetration of Internet and Broadband through better bundling of services.
- Facilitate price reduction for local and long distance tariffs, thus benefiting customers directly.
- Encourage investments in convergence and unified communication related initiatives.
- Facilitate development and launch of new services to the customers.
- Provide additional stream of revenue share to Government.

The current ISP license would need to be modified suitably with the ability to provide all access services, viz. Voice, TV / Video, Data alongwith other applicable terms and conditions. This will then also ensure that every broadband connection provided by such ISPs would contribute towards the crucial tele-density.

Unbundling of the local loop should be expedited and Infrastructure Sharing should also be permitted to the ISPs.

The content provider/application service provider should be separately licensed under a new Value Added Service provider category which should give them the right for having interconnection with the access providers on a cost basis or as determined by TRAI.

**Issue: 1.2 for Consultation:**

**Is there a need to identify the control points and monitor the market development to ensure smooth migration to NGN? In your opinion what should be the**



**regulator's role in such context? Please give your suggestions with justification.(refer para 4.11.9)**

**Response 1.2:**

It is essential to identify the control points, however the specific compliance need to be left to the operators, to encourage competition, particularly in case of Competitive Control points which has commercial/revenue edge. The control points should not be mandated. The migration of NGN should be left to market forces. We believe, at this stage, there is no need to mandate any parameters to

Specific compliance viz. Protocol standards, inter-working, applications, Security, Revenue sharing etc need to be left with the operators who interconnect with each other, to encourage competition and quicker roll-outs.

**Issue: 1.3.i for Consultation:**

**In an NGN environment where the content provider and the carrier (Telecom Service provider) could be either same (On deck) or two different entities (Off deck), who should be responsible for ensuring content regulations? Should content provider (In off deck scenario) be made fully responsible for infringement of intellectual property right violation of advertisement code, program code or any other provisions as existing, in respect to his content? How such provision can be effectively implemented? Give your suggestions with justification.**

**Response: 1.3.i**

The onus must be on the provider that first places the content "on the wire". For on-deck it will be the responsibility of the Telecom Service Provider and for off-deck the Content Provider.

In the case of Off-deck it must absolutely be the responsibility of the Content Provider to comply with regulations regarding content.

In order to make this enforceable, even though the Telecom Service provider is not responsible for the content, it must be still be required to properly identify the source of the content to the regulators upon request

**Issue: 1.3.ii for Consultation:**

**In case of off deck content provision, Should responsibility of telecom service provider be limited to prevent the flow of content notified as violation of various provision of IPR, program code, advertisement code etc to encourage flow of more content on the network? Give your suggestion with justification. (refer para 4.12.7)**



**Response: 1.3.ii**

The Telecom Service provider is the first point of entry at network from content provider and hence the facility of blocking shall be the responsibility of the Telecom service provider.

Telecom Service provider shall possess the capability to block such content upon proper and valid notification from the regulator and this requires the need the ability at Telecom Service provider to identify the source of such content.

**Issue:1.4 for Consultation:**

**In order to support subscribers' end-to-end SLA requirements across the networks, is there a need to well define different types of SLA at point of interconnect (POI) among operators in NGN environment? What parameters must be considered for defining such SLA? Please give your suggestions with justifications. (refer para 4.13.3)**

**Response: 1.4**

Globally interconnection between ISPs' & PSTN/PLMN today happens on IP or TDM, whichever is available with the PSTN/PLMN, though it will gradually move to IP softswitches based architecture(NGN). Therefore, IP based interconnection should also be permitted subject to mutual agreement between the parties Each Operator should mutually agree for defined SLA within operator's network from end user till POI. Latency, Jitter, uptime, time to enable the service should be the parameters which must be considered for defining such SLA.

It is felt that SLA requirement may be in the initial phase allowed to be driven by market forces. The SLA shall have KPIs (Key Performance Indicators) in relation to the QoS and Performance factors which shall be mutually agreeable between Inter-connecting operators.

The Service levels may also vary and have different grades which can be offered to customers and this may have different tariffs. And hence SLAs shall be in mutual agreement between operators at the Point of Interconnect.

**Issue: 1.5.i for Consultation:**

**Do you agree that there is a need to define common point of interconnection to facilitate interconnection in NGN environment both technically and economically? Give your suggestions with justifications.**

**Response: 1.5.i**



The interconnection between the licensed operators in India is already working and most of the operators are connected to each other. At this stage, there does not appear to be any need to mandate a common point of interconnection separately for NGN and NGN traffic can also be exchanged on the same links which are being used for TDM traffic. The common interconnection will restrict competition and will encourage monopoly, since this will act as a major toll.

This should be driven by market forces only as the objective is to increase competition which benefits the customers.

**Issue: 1.5.ii for Consultation:**

**Do you agree that interconnection of all service providers/ entities through Interconnect exchange will be desirable to facilitate peering of IP traffic in NGN environment? If yes, should all service providers be mandated to get connected (at least with least defined capacity) to Interconnect exchange? Please give your comments with justifications. (refer para 4.14.11)**

**Response: 1.5.ii**

The issue of interconnect exchange has been under consideration for quite some time but there appears to be no headway made because of the existing licensed operators already being interconnected with each other. It is felt that Inter-connect exchange may restrict the flexibility of interconnection between operators for exchange of traffic, in terms of capacity and tariffs. The benefits of the specific interconnect are generally always extended to the customers and agreement between operators which will benefit the customers.

Thus there is no need to mandate a compulsory interconnection with a least defined capacity to an interconnect exchange. However, if any licensed operator wants to create a common peering point for all the service providers the same should not be discouraged and this issue should be left for the market forces to decide. .

**Issue: 1.6 for Consultation:**

**The present licensing conditions require installation of all switches within the licensing area. Do you feel that such restrictions may not facilitate best economical network model and may impact migration to NGN? If yes, what changes in licensing condition do you suggest? Please give your suggestions with justifications. (refer para 4.15.6)**

**Response: 1.6**

Yes, the present licensing restrictions will not facilitate best economical network model and may impact migration to NGN as the CAPEX will increase if the termination point or switch within licensing area is made mandatory for routing traffic. Since NGN is an All IP



network, termination of virtual circuit is desirable to facilitate NGN migration. So there should not be any mandatory condition for termination of switch within licensing area for routing traffic. Operator can have one switch with media gateways in each licensed service area. Physical location has very little meaning in a NGN environment and keeping such restrictions will be an impediment in the economical network model, which will discourage operators to migrate to NGN.

**Issue: 1.7 for Consultation:**

**Whether there is a need to define any timeframe in which service providers migrating to NGN networks will be mandated to provide compatible interface for interconnection with TDM networks? If so, what should be the maximum time limit of such mandate to provide compatible interface for interconnection with traditional TDM networks? If no, what should be the method of interconnection to ensure compatibility? Please give your suggestions with justifications. (refer para 4.16.4)**

**Response: 1.7**

It should be the responsibility of a NGN service provider to provide TDM compatible interfaces for interconnection. The time limit can be 3 months from the date of request by the service providers migrated to NGN.

**Issue: 1.8 for Consultation:**

**Do you consider country specific standardization will be necessary to ensure inter operability in NGN environment in view of many optional fields in existing standards? If so, is there a need to prescribe mandatory Interface approval to ensure the interoperability in NGN? If no, then what should be done to ensure interoperability? Please give your suggestions with justifications. (refer para 4.17.3)**

**Response: 1.8**

Yes. Country specific standardization shall be considered for better inter-working conditions as a guideline and should not be mandated. However, mandating the interface approvals might restrict the timeframes of migration plans of operators, since development of country specific standards/protocols by vendors will take significant time.

**Issue: 1.9 for Consultation:**

**Whether emergency number dialing be mandated from devices (Fixed, nomadic, and mobile) connected on IP platform in India? If so, is there a need to mandate**



**location details of such devices by service providers? Please support your suggestions with suitable justification. (refer para 4.18.9)**

**Response: 1.9**

At present emergency dialing cannot be addressed fully in almost all countries due to the absence of location information, etc., though some advances have been made especially in EU Member States. We recommend that emergency dialing should not be made a mandatory requirement; rather the progress on the issue should be closely watched and subscribers should be informed about the limitation of the service.

**Issue: 1.10 for Consultation:**

**Whether use of re-authentication for identification verification be mandated across the networks? In your opinion, will this help to reduce vulnerabilities such as identity theft, man in the middle, and IP spoofing? (refer para 4.19.2)**

**Response: 1.10**

Re-Authentication should not be mandatory, but desirable to have. Re-authentication will increase overloads on current network and can increase delay in communication. This should be left to the individual licensed operators subject to any guidelines which may be issued by DoT in respect of security monitoring.

**Issue: 1.11 for Consultation:**

**Is IPv6 an essential feature of IP transport for the migration to NGN? If so, what should be the timeframe for migration from IPv4 to IPv6? Please support your suggestions with suitable justification. (refer para 4.20.6)**

**Response: 1.11**

It is felt that IPv6 is not essential for the migration to NGN and hence not to be considered as a pre-requisite for the migration, which might delay the migration. However, operators need to consider this fact of migration to IP v6, while undertaking deployment of NGN systems. Looking at the features of IPv6 it may be desirable to incorporate it or have upgrade path at the initial stage itself while finalizing the specification standards for NGN .