

Annexure - I

Response from ACTO on TRAI's Consultation Paper No. 08/2014

On Migration to IP based networks

Background

Telecommunication networks around the world are moving towards all IP based next generation networks (NGN). This migration is driven by higher economies of scale and scope, price reductions for IP network elements, opportunities for new services and an improved experience for the end users. In IP based networks, the service layer is separated by the transport layer, which transforms them into a platform of converged infrastructure for a range of previously distinct networks and related services. These features may have an impact on traditional business models and market structure, as well as on regulation. The legacy telecommunication markets have typically been regulated and governments around the world have issued policies for the sector, whereas the developments towards IP based networks, which are characterized also by the convergence of services, require light touch of regulation/control and the migration of NGN has been left on commercial decision of the telecom service providers.

IP-based network: IP-based networks support the provision of all services. This means that all information is transmitted via secure packets. Packets can take different routes to the same destination (at times least cost mode), and therefore do not require the establishment of an end-to-end dedicated path as is the case for PSTN-based communications.

Packet-based, multi-purpose: While traditionally separate networks are used to provide voice, data and video applications, each requiring separate access devices, with NGN different kinds of applications can be transformed into packets, labeled accordingly and delivered simultaneously over a number of different transport technologies, allowing a shift from single-purpose networks (one network, one service), to multi-purpose networks (one network, many services). Interworking between the NGN and existing networks such as PSTN, ISDN, cable, and mobile networks can be provided by means of media gateways.

Separation of transport and service layer: This constitutes the key common factor between NGN and convergence, bringing about the radical change in relationship between network layers (transport infrastructure, transport services) and control (contents, services and applications). In next generation networks service-related functions are independent from underlying transport-related technologies. The decoupling of applications and networks allow applications to be

defined directly at the service level and provided seamlessly over different platforms, allowing for market entry by multiple service providers on a non-discriminatory basis.

Regulatory support for Convergence of Networks, Devices and Services as envisioned under the National Telecom Policy (NTP 2012):

In the era of legacy networks market players, especially network operators have specialized in providing different services (fixed voice, mobile voice, data and TV) and their business models had not been competing with each other. Usually, there were vertically integrated operators of telecommunications networks, cable operators, broadcasting network operators (providing TV and/or radio via spectrum that was available to them), and finally mobile operators offering voice services via specifically dedicated spectrum. The change that has taken place by the introduction of IP-based transport technology, is a transition towards a model where telecommunications operators, cable operators, broadcasters and mobile operators are able to provide voice, video, audio and data services over the same infrastructure. This results in a converged world of provision of networks and services allowing every network to provide any service.

We therefore request that the convergence of networks, devices and services should be allowed in line with the objectives of National Telecom Policy (NTP 2012). Convergence will enable a much Advanced and Open IP platform, which will enhance the end-user experience and will efficiently address the growing business needs by leveraging on the best of both worlds (IP & PSTN).

Removal of Restriction on Interconnection:

The transition / migration of Internet Protocol (IP) requires the removal of legacy regulations of telecom service providers, including regulation of interconnection, since traditional public utility regulations are unnecessary in the more robust and efficient IP environment. It is our belief that there should be minimal, regulatory interference in these matters, and the resolution of the issues and related matters raised in the consultation be left to market-based commercially negotiated solutions.

We do not support mandating IP interconnection but would support the regulator setting a date after which TDM networks would have no entitlement to interconnection and would need to bear the costs of converting IP signals to TDM. Both IP and TDM could co-exist after that date, but TDM would bear the signal conversion costs.

We believe that there should be no regulation of any aspect of interconnection in an IP environment just as there is no regulation of Internet traffic exchange arrangements today, so all the following issues would be commercially negotiated with no regulatory involvement:

- Mode of Interconnection
- Need for Interconnect Exchange
- Locations of points of interconnection
- Interconnection measurement (minutes or capacity)
- Interconnection charging principles
- Criteria to estimate traffic minutes
- Other modifications to IUC and
- Interconnection for application and content providers

There would be no need for Quality of Service (QoS) regulation in an IP environment. The issues raised by Q.12 through Q.15 would similarly be determined by the market rather than regulatory requirements. Sharing of IP based core and access network elements should be a matter of commercial negotiation.

As regards the national numbering plan and ENUM is concerned, we support a market-based approach developed by industry that does not involve prescriptive regulations requiring establishment of an ENUM data-base.

The current restriction on PSTN interconnection extending to the Closed User Group (CUG) environment should be recommended to be liberalized

The continued restriction would impact the transition towards achieving the stated objectives of full convergence goals of networks / services / devices as enshrined in the National Telecom Policy 2012 as below:

“3.1. To orient, review and harmonise the legal, regulatory and licensing framework in a time bound manner to enable seamless delivery of converged services in a technology and service neutral environment.”

*“3.3. To move towards Unified Licence regime in order to exploit the attendant benefits of convergence,.....This new licensing regime will address the requirements of level playing field, rollout obligations, policy on merger & acquisition, **non-discriminatory interconnection including interconnection at IP level etc. while ensuring adequate competition.**”(Emphasis Supplied).*
