



# Pakistan Telecommunication Authority

## Best Regulatory NGN Practices

(UAE 5 – 7 February 2007)

## **Introduction**

A regulator's objective with respect to the evolution of New Generation Networks are to fully explore and understand:

- the Comparison between fixed, mobile & broadcast network approaches to NGN with respect to ACCESS Networks, Interconnection, Tariff
- understand the co-existence of legacy, HYBRID and NGN networks
- the emerging service challenges and maintaining of competition
- understand the interdependence of NGN and the Internet.
- how NGN could be the engine for convergence.
- understand standardization, Interconnection and Interoperability issues.
- maintaining acceptable levels of Quality of Service.

### **ACCESS:**

Understanding the importance of ACCESS for the convergence of Voice, Data and Broadcast services our mission is to identify cost effective network topologies for both the urban and rural applications. PTA is aware of the fact that for urban applications we need access networks which would offer high speed data and extremely high speed video applications. The requirements of a residence would differ from that of a small-office-home-office while that of an enterprise would be significantly different. For a country like Pakistan it would be inconceivable to convert its access networks overnight into an IP based access. More than likely due to the poor and limited copper access in the local loop Pakistan will have to continue to rely on a relatively medium speed wireless network. However most of the business districts in the metropolitan cities will be equipped with decent amount of fiber-to-the-home networks. We believe that instead of NGN being a natural evolution of traditional PSTN with a separate evolution of the Internet the right path is that NGN should emerge as a common platform with a converged platform for all networks.

### **COMPETITION:**

Due to the recent open and unrestricted policies of the Government of Pakistan coupled with the well accepted response from international investors which is mainly due to the abundance of the untapped local market potential, PTA is less concerned on issues like Competition. Understanding the importance of Competition, we believe that continuity of current policies Pakistan will foster enough competition. Having said this, our biggest concern is to keep a balance between the incumbent and the new operators. It is anticipated that significant 3G operators will emerge but the same may not happen in fixedline services. The regulator expects that regional players will emerge in fixedline services which will compete with the incumbent through convenient interconnection agreements between new local exchange carriers (NLEC) also called as local-loop service providers. IMT-2000 systems are already based on "all IP" connectivity with global roaming and mobility solutions, and allow charging/ billing.

### **CONSUMER AWARENESS & PROTECTION:**

PTA maintains its proactive role in consumer awareness campaigns through mass media, arranging workshops, seminars through participation of the private sector. Consumer friendly policies have been adopted and there is a constant encouragement coupled with regulatory push towards the establishment of consumer friendly 'Service Level Agreements'. Protecting the rights of the consumers, it is imperative that the availability of open and multi-vendor interfaces for service and application delivery for fixed and cable networks are essential.

### **INTERCONNECTION:**

Regulators will have to adopt themselves to the new developments in designing more flexible but accurate interconnection models. With WLAN access technology, seamless MM services provisioning is nowadays driving the fix-mobile-Internet convergence. Distance may become less important giving more importance to issues like bandwidth utilization and time. Networks may have to be shared among a bigger set of service providers most of them not owning the networks but having access to resources. Newer interconnection models and costing will be required for the convergent era.

### **INVESTMENT:**

NGN networks will bring convergence of technologies and services. This phenomenon will lower service cost, thereby encouraging investments. However as this phenomena is happening globally and also rapidly, it is feared that the developing countries may have to pay the premium cost for adopting the NGN phenomena.

### **LICENSING:**

PTA believes in convergence. It has started its convergence plan through simplification of its CLASS VALUE ADDED SERVICES licensing regime. All data value added licenses have been converted into a single license and the same have been adopted for voice value added services. The licensing regime has been made simpler. Many IP based services have trickled down to registration only with no liabilities and obligations.

### **PRICING:**

PTA has taken a leap frog forward in rationalizing the leased line pricing structure. These pricing will assist new NGN network investment as the gap between Voice and Data leased media has been narrowed. Similarly the differential between Mobile and Fixedline pricing has narrowed due to regulatory changes and directives. Such a feature will help rationalization of fixed and mobile termination rates. The international consultancy on cost based interconnection charges will also help in streamlining the pricing structure further.

### **QUALITY of SERVICE:**

Although there are some concerns that IP based services and the highly cut throat tariff structure may lower the Quality of Service but the regulator is bent upon maintaining high quality of service requirements. This will ensure quality services at affordable costs. The regulator is confident that the existing Quality of Service parameters coupled with some new network parameters based upon delays and latencies will adequately help in improving or atleast maintaining the acceptable Quality of Service parameters.

However, some new services may require addition of QoS parameters through regulations, which had not been conceived at the time of issuing existing licenses.

### **UNIVERSAL ACCESS/ SERVICE:**

Although provisioning of Universal Access/ Service through 'Universal Access Fund' is outside the domain of the regulator in Pakistan and being handled by the policy maker, but the regulator sees NGN as a vehicle to provide converged services at affordable costs which would certainly be lower than providing these services separately. Once methodology is to push a section of the spectrum specifically for IP based services, which is large enough to offer a decent amount of data-rate to the subscriber at the access level and is simultaneously inexpensive too. This can only happen by opening reasonable amount of spectrum for IP/ Internet services. The challenge for the regulator is that such services may primarily be limited to Internet and do not jeopardise the business model of cellular operators.