



FUTURE OF TELECOMMUNICATIONS SERVICES AND THE DISRUPTIVE INFLUENCE OF CONVERGENCE

INTRODUCTION

The telecommunication industry in Nigeria has grown tremendously in the last 10 years. The industry growth has been mostly in the voice segment. In the last five years, demand for data has grown around the world. In Nigeria this is driven by availability of new services online (i.e. Facebook, Twitter, Online newspapers, Blogs, YouTube etc), devices availability as well as infrastructure provision especially by mobile operators in Nigeria. The rapid developments of information and communications technology and the advent of new services over telecommunication networks have given rise to convergence in the way services are delivered to customers.

According to Hellerstein & Associates *“Convergence has been defined as the ability of one or different networks to carry different services. Convergence can also be described as the bringing together of industries in the communications area, which were previously viewed as separate and distinct in both the commercial and the technological sense”*. Examples are the provision of Internet access and TV to mobiles and triple or quad play services offered by ISPs. The biggest internet service providers in Nigeria today are the four GSM mobile operators which have been largely made possible due to technology convergence. Telecommunications operators are deploying transport infrastructures which are agnostic services. These infrastructures are IP based. Hence voice, data and video services are being carried on the same network infrastructures. What were once distinct networks carrying distinct services, each with its own protocol, are now uniformly carried over IP networks.

BENEFITS AND IMPLICATIONS OF CONVERGENCE

As convergence grows rapidly in the telecommunication industry, it raises regulatory challenges given the merging of firms and facilities. This is because traditional regulatory frameworks were designed for an era when clear functional

differences existed between services and infrastructure and were not designed for this new environment of converged networks and services where functional differences no longer exist.

However, there are benefits to the convergence currently ongoing in the telecommunications industry. Some of these are:

1. Convergence creates possibilities for companies to develop and deliver services across technology platforms, and for users to get access to new kinds of communication and media services
2. Promotes the expansion of competition, allowing the introduction of inter-modal competition where networks and technologies compete with each other with no technological or regulatory restrictions
3. Reduces costs of telecommunications services
4. Fosters the development of more efficient technologies and services
5. Opens the door for new ways for people to obtain Internet access

Convergence regardless of the associated benefits has given rise to uncertainties in regulatory framework as earlier stated. This is particularly impactful in such critical areas as interconnection between networks, quality of service as well as competition and pricing.

INTERCONNECTION BETWEEN NETWORKS

Traditionally, interconnection regulation was established for voice services where rates were generally time based, however for converged services which are based on transport via a common IP protocol, interconnection rights and new interconnection schemes with different types of access and charges to ensure that everyone can interconnect regardless of the type of network they are using are required. Interconnection arrangements for circuit switched PSTN/PLMN networks have been markedly different than those for IP networks, not only at a technical level, but also in terms of associated regulatory obligations. The convergence of these networks raises difficult questions as to how interconnection should be regulated going forward. Interconnection of fixed and mobile networks in the future will need a major rethinking as a result of:

1. The decoupling of the network from the service
2. The migration to next generation network (NGN)
3. The evolution of the access network to an all IP network
4. The changing cost structure of the network

Regulators seek, specifically in regard to IP interconnection and also generally, to ensure that all users derive maximum benefit in terms of choice, price, and quality of communication services; to minimize any distortion or restriction of competition in the telecommunication sector; and to avoid barriers to innovation and to efficient investment in infrastructure.

COMPETITION

Network convergence is an important driver of change in the telecommunications industry with a single integrated IP network delivering a combination of data voice and video. This makes it possible for different platforms deployed by different operators in hitherto different industry segments (e.g. fixed and mobile) to offer equivalent services with a potential positive effect on competition. This convergence also enables the offering of bundled offers of multiple services to customers, with the effect of changing the face of competition and introducing new competitive challenges.

As service offerings becomes largely independent of the underlying network due to the common transport requirements, Independent service providers can compete with established network operators to offer data, voice and video services to end-users over existing network infrastructures. This development presents a potential boost to competition and improved choice for the subscriber. This may be viewed as a competitive threat by existing operators, who may be inclined to limit the potential growth of this competitive threat.

These independent competitors, especially over-the-top (OTT) operators, present an interesting challenge to regulators worldwide. A pertinent question that is asked is:

OTT players provide services to end-users across geographical borders, how should regulation of these players be carried out within national borders considering the unique telecommunication environment in different countries

The activities of these players has created choice for end-users, deepened competition for the provision of telecommunication services and improved innovation in the sector. However, it also creates unique regulatory challenges with respect to ensuring some of the cardinal objectives of regulation are continually met. These objectives are:

1. Ensuring that users derive maximum benefit in terms of choice, price, and quality
2. Ensuring that there is no distortion or restriction of competition; and
3. Encouraging efficient investment in infrastructure, and promoting innovation

While OTT players positively contribute towards the realization of the first objective and part of the third objective (with respect to promoting innovation), it creates challenges towards meeting the other objectives due to its potential distortion of completion, it potentially could create a dis-incentive for existing operators to provide the required investments for network infrastructure expansion and modernization. Hence innovative regulatory frameworks are needed to address these challenges.

QUALITY OF SERVICE

With convergence leading to the evolution of networks from circuit switched based to IP packet switched based systems; the quality of service framework for both systems is also different. For circuit switched telecommunications networks, ensuring quality of service standards are met by operators has been a main function of the regulator. However, for converged services, new QoS standards are required since each of the services have different QoS requirements. For example, telecommunication voice services have a more stringent QoS standards compared to traditional data services like e-mail services. This will thus require a modification of existing QoS frameworks to both enable the growth of these new converged services and still maintain an optimal level of QoS delivery.

CONCLUSION

In conclusion, it is a known fact that technology is always faster than regulation, and convergence is moving ever ahead at a rapid pace. There is thus a need to adapt regulatory frameworks to the new services convergence reality and the growth of services like VoIP, Video sharing sites and new operators like OTT players.

Mechanisms to ensure flexibility in the regulations are also required through continuous engagement with other regulators as well as stakeholders in the telecommunications industry to ensure that any framework that results supports full competition, and ensures transparency and accountability.

It is also pertinent to note that an effective restructuring of the regulatory framework that addresses the challenges thrown up by convergence requires a solution that addresses all key areas in the telecommunication industry.

Thank you.

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Abuja, June 20, 2013***