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NEXT GENERATION NETWORK



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Next generation networks (NGN) make a big difference in the way we work, learn, communicate, shop, find information and entertain ourselves and our loved ones. Within next few years when today's children are adults, they will tend to think that the world we live in presently is a far cry from their world with the services enabled by next generation networks. NGN is a vast area used to describe key architectural evolutions in telecommunication and access networks. The basic idea behind of

NGN is that one network transports all information and services.

The attention on NGN is growing as both governments and the private sector conclude that their global competitiveness and long-term socio-economic development depends on ubiquitous digital connectivity. As much as railways and roads became critical infrastructure in the previous century, broadband is widely recognized as the foundation for high-performing economies during this century. NGN can provide services including telecommunication services and able to make use of multiple broadband, qualities of service-enabled transport technologies and in which service-related functions are independent from underlying transport-related technologies.

Network engineers are now accessing to technology which creates the connectivity that enables essentially any end user service requirement. Uncompromised digital connectivity is in demand to enable individuals, teams and organizations to compete in a modern economy whether they are in the private or public sector. The challenge is not in developing the technology, it is applying it through a business approach that creates ubiquitous connectivity and provides a choice of services to end users.



Next Generation Networks are based on Internet technologies including Internet Protocol (IP) and Multiprotocol Label Switching (MPLS).



For voice applications one of the most important devices in NGN is a soft switch - a programmable device that controls Voice over IP (VoIP) calls. It enables correct integration of different protocols within NGN. The most important function of the soft switch is creating the interface to the existing telephone network, PSTN, through Signaling Gateways and Media Gateways.

The IP Multimedia Subsystem (IMS) is a standardized NGN architecture for an Internet media-services capability defined by the European Telecommunications Standards Institute (ETSI) and the 3rd Generation Partnership Project (3GPP).

Next generation network services is a jargon term with no specific meaning. The term is used, in some telecommunication communities, in a loose way to refer to services that have not traditionally been provided by telecommunication operators circuit switched networks. Services include VoIP, IPTV, Presence-Based Applications, instant messaging and location-based services. All of these example services are deployed and used on the Internet or private IP networks and access is available to them from traditional circuit switched networks.



NGN Capital is a venture capital firm dedicated to healthcare investing, focusing on ventures with the potential to achieve above average private equity returns with an emphasis on later stage investments.

There are several other NGN enabling services,

- Enhanced Resiliency
Services such as Software as a Service (SaaS) and other network based applications are transforming the way the Network is viewed from an enabler to an “always-on” platform.
- Security
Security services are offered as an in-cloud solution to help protect networks, communications and information at or between endpoints as a managed service.
 - Enterprise Class Customer Premise Equipment
Enterprise Class CPE Service provides the customer with a more sophisticated CPE with higher performance and a broader set of features.
 - Mobile Connect
The Mobile Connect Service provides RSPs with a country wide, scalable, “backbone” service with which to serve the retail market



If we consider about the situation of NGN in Sri Lanka as a developing country is not in a very good place. Although with respect to the other developing countries we are at a high position with the technological abilities, we are a far away from the developed countries. But we are trying to connect with the NGN technology as a country and as a result of that we have organized conferences on ‘Exploring the impact of new standards on NGN developments in Asia Pacific’ in Sri Lanka in 2009.

When comparing to the developed countries, developing countries like Sri Lanka is still struggling to come to the standard level.

With the following table you can easily identify our situation when comparing to the developed countries.

Characteristics	Developed Countries	Developing Countries
Country's policy and strategy for broadband	implemented with government funds	It is for seen in related strategic document but no funds for implementation
Fixed broadband penetration	above 20%*	above 20%*
Mobile broadband	above 20%*	above 20%*
Broadband (BB) access	Broadband (BB) access	Broadband (BB) access
BB access in rural areas	BB access in rural areas	30%, target?
Economy	ICT based	Not ICT based
ICT based	ICT based	ICT based
Services	Quadra play, Triple play	Internet
New revenue stream/	Yes/ quickly	No/ slowly
Expected ARPU per NGN services	above 30 \$ for triple play	below 10 \$
Expected average bandwidth	8 – 20 Mb	<= 4 Mb
Technologies for today	Optics, 3G, transition to HSPD and LTE	8 – 20 Mb
Approach to NGN	Evolutionary	no money for evolution, existing networks not ready for revolutionary approach
Customer behavior	size of innovators are bigger, time interval of early majority and late majority is longer	size of innovators are smaller, early adopters is larger, time interval of early majority and late majority is shorter than in DC
Time frame for NGN	2010 – 2015	2012 - ??

* Source International Telecommunication Union (ITU) statics

So with the next generation networks, the next generation of our society will gain so many advantages and it will help them to make their lives easier. Now the world gives the attention to NGN as it is the most valuable change that took in the attention from the inventers to develop the living styles more conferrable to make the future generation to build up an easy and happier life.

