

# COMPENDIUM ON NEXT GENERATION NETWORKS (NGN)

## SYNOPSIS

Telecommunication Engineering Centre (TEC), a premier technical body for telecom technology under the Ministry of Communications and Information Technology, has played a lead role over the past 50 years in laying standards driven robust telecommunication network in the country, initially for the state-run telecom department and now for all the telecom service providers.

However, there are lots of concerns and apprehensions in the minds of the service providers about the technological capabilities of NGN. TRAI had also expressed that there should be more focussed attempts by the Government to disseminate relevant information amongst all the stakeholders. Keeping these points in mind, TEC took up the responsibility of preparing and compiling a Compendium on NGN, to disseminate information on various issues on NGN and dispel the apprehensions of stakeholders.

The concerns raised in this release are dominantly technology oriented in nature. Topics that have wide-spread interest amongst the stakeholders and that have intricate dependence on success of NGN have been chosen.

The topics are arranged into four parts and serialized in logical sequence so as to facilitate easy access to readers interested in specific topics.

Part I gives an overview of NGN to familiarise the reader with NGN concept, architecture, services etc. based on the work done by ITU-T Focus Group on NGN. “An overview of NGN”, and “Evolution from networks to NGN” are introductory chapters. They also provide links to detailed analysis of the key topics covered subsequently in the document. NGN Functional architecture, Quality of Service (QoS) and Network Security aspects are discussed in subsequent chapters.

Part II covers the initiatives taken by Telecom Regulatory Authority of India (TRAI), Department of Telecom (DoT)/Telecom Engineering Centre (TEC) and Service providers. International Standardisation activities are also presented.

Part III covers roadmap for migration of Indian network to NGN. Technologies, services and other aspects of migration of IP network, PSTN, Mobile network, Migration of IPv4 to IPv6 are discussed in different chapters.

Part IV contains technical papers on various focus areas of NGN. Status of international standards and key issues are highlighted, underlining the need to formulate national standards, testing and certification to realise seamlessly interoperable, QoS enabled and secured NGN in the country. Topics include Softswitch, IMS, IPv6, WiMax, Fibre-To-The-Home (FTTH), IPTV, QoS, Fixed-mobile convergence, Rural ICT infrastructure, etc.