

Telecom Policy and Next Generation Networks (NGN)

A.K.Srivastava
DDG (AS), DOT

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Background

- Access Services in India was opened up for private participation in 1994-1995 with limited number of players
- Unlimited competition for access services introduced in 2003
- This has introduced fierce competition among the service providers
- They are now offering new features, value added services and lower tariff plans to attract customers

Licensing Scenario

- Separate licences have been issued for basic, cellular, ISP, satellite and cable TV operators each with separate industry structure, terms of entry and varying requirement to create infrastructure

Technological Advancements

- Convergence of both markets and technologies is a reality
- This convergence now allows operators to use their facilities to deliver some services reserved for other operators

Telecom Policy

- The convergence of market & technologies were considered and a relook to the existing policy framework of NTP 94 was given while framing the New Telecom Policy 1999
- In 2003, the NTP 99 was amended to accommodate new class of services and Unified Access Services Regime with unlimited competition was introduced for access services.

Vision for Telecom sector as per NTP'99

- ✓ becoming an IT superpower and develop a world class telecom infrastructure in the country

Outcomes of Policy initiatives

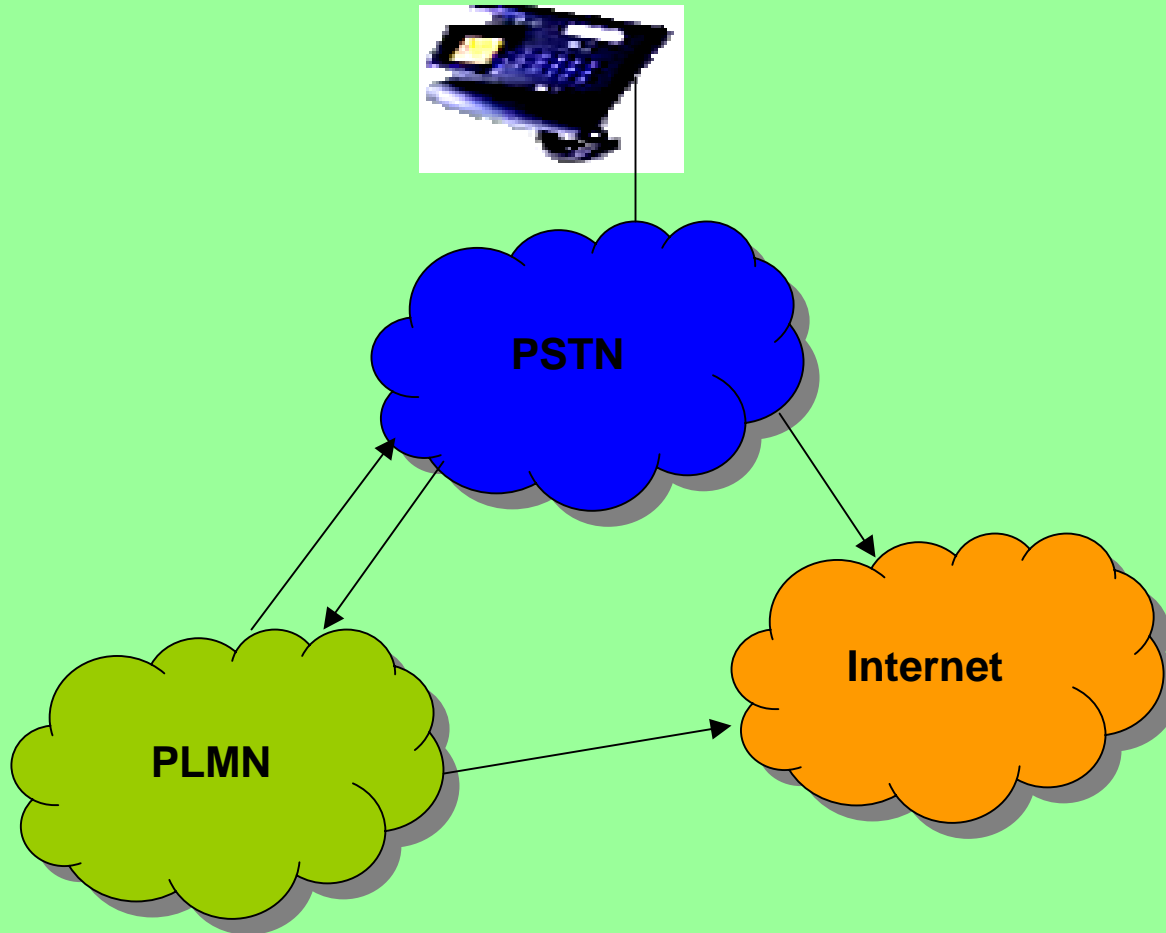
- With the introduction of unlimited competition, number of service providers providing mobile services in each service area has increased from 2-4 to 5-8.
- This has forced them to offer many new features, value added services and lower tariff plans in order to attract new customers as well as customer retention.
- Now the customers have the option to choose between hosts of packages at affordable rates offered by these service providers , which has led to unprecedented escalation of customer expectations

Customer's expectation today ?

- Access to their preferred facilities and services irrespective of type of network and their geographical location
 - e.g. voice, video, data and multimedia messages
- Good coverage, Mobility, Portability
- Convenience, Value for money, Simplicity

Migration from Circuit switched to IP Networks

Existing Network Architecture

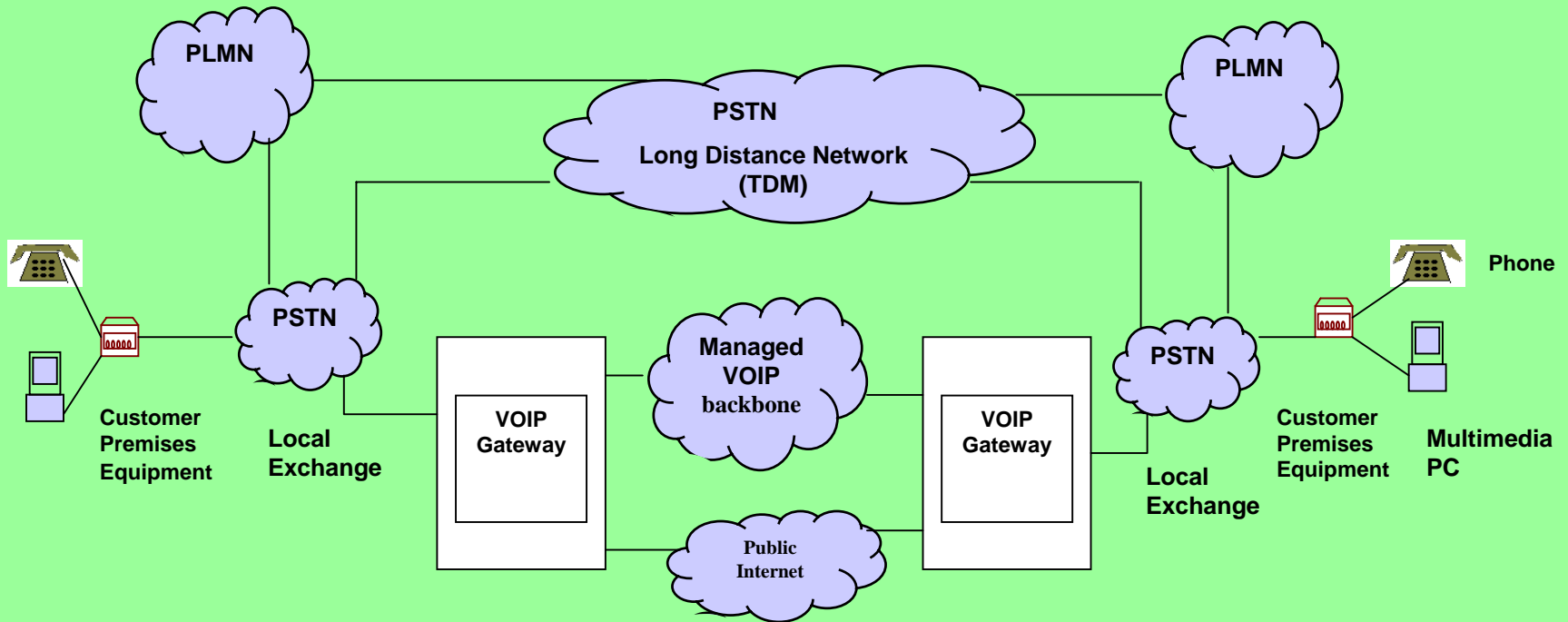


Step by Step introduction of IP Technology

- The migration has been started step-by-step
- In the first phase, Long Distance Networks on IP technology have been introduced by some service providers
- The Network Architecture with this introduction looks like



Introduction of IP in Long distance Telephony Network



Next Step – Fixed Mobile Convergence

- Fixed Mobile Convergence would enable telecom operators to provide services to users irrespective of their location, access technology and terminals to the maximum satisfaction to their customers

Why NGN?

- Next Generation Network (NGN) is a powerful platform to provide different services like Voice, Video and Data.
- NGN provides a single multi-service network which encompasses all the elements of existing telecommunication networks – including public switched telephone network (PSTN), wireless networks and data networks.
- NGN enhances the service delivery capabilities of networks.

Why NGN?

- NGN permits separation of transport, control and service & application layers, providing greater flexibility to launch value added services.
- The NGN provides the ways & means to provide bundled service offerings in the areas of
 - Standard Voice Telephony;
 - Fax service;
 - E-Mail & Internet;
 - E-Governance & E-Commerce Services;
 - Wideband / Broadband Access & Services;
 - IP TV, Video on demand; etc.

Why NGN?

- The migration to IP-based NGNs breaks the strong historical linkage between the *service* and the *network*, enabling the emergence of converged service providers.
- Implications for regulation in support of competitive entry:
 - NGN introduces new forms of competition.
 - Does not necessarily eliminate traditional market power.
 - May enable the emergence of new competitive bottlenecks.

Why NGN?

- Many operators, especially incumbents, look to migrate to NGNs.
 - Enhance economies of scope and scale.
 - Accelerate time-to-market for new IP-based services.
- NGN represents a marriage of PSTN and Internet.
 - Different technology.
 - Different culture.
 - Substantially different regulatory traditions.

NGN implementation incentives

Network and technology optimization	<ul style="list-style-type: none">•Optimization of cost structure•Simplification and standardization of processes•Extension of asset useful life•Displace of cable competition, offering of triple play services•Creation of future oriented infrastructure <hr/> <ul style="list-style-type: none">•Establishment of a future oriented telecommunication company, which remains competitive in a convergent world•Increase of productivity (turnover and costs)•Buildup of capabilities to ensure competitiveness in the face of intense competition and the severe regulation regime
Implementation of new services	<ul style="list-style-type: none">•Generation of competitive advantage through a migration that is in line with customer services•Positioning of the business segment within ICT•Development of new services

NGN & Licensing Provisions

- The present licensing regime in India is largely service oriented like Basic Service Operators license, Cellular Mobile Service license, UAS License, Internet Service Provider license, Infrastructure provider etc.
- The Access Services licensees can provide different services (Voice, Video and Data) under a single license.
- The scope of existing Access Services License permits the operators to offer majority of bundled services using any technology (including NGN), which is of International Standards.

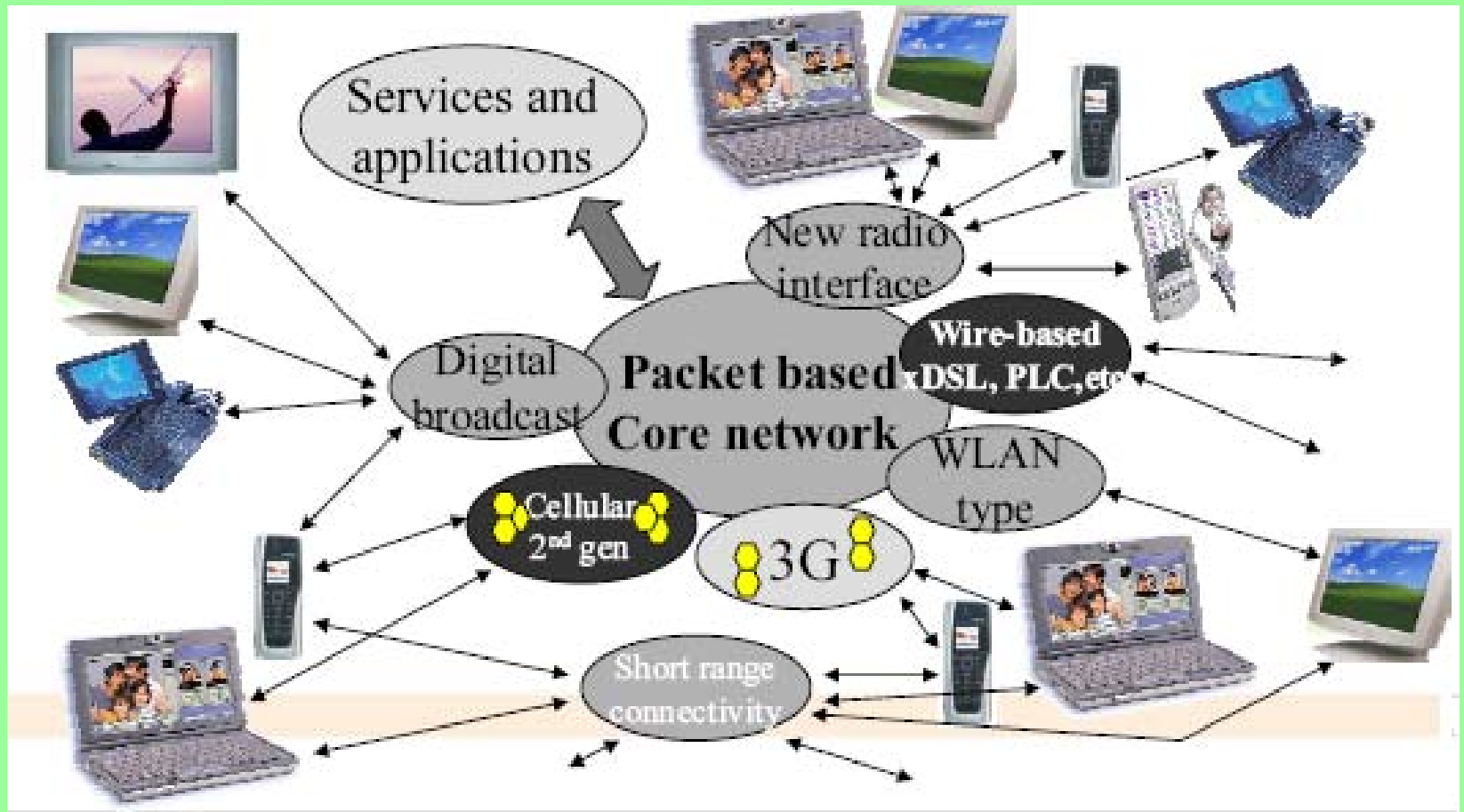
NGN & Licensing Provisions

- Access Services Licensees are responsible for the contents carried on the network according to their respective Licence conditions of following licences.
 - CMTS Licence
 - UAS Licence
 - ISP Licence
- Present licensing conditions mandates to put all the equipments of the network within the licensing area.

NGN Implementation, How?

- The deployment of NGN would require Upgraded local loop viz. passive optical networks (PON)
- In European countries, NGN Access, is predominantly through FTTH (Fibre to the Home), FTTC (Fibre to the Curb) or FTTB (Fibre to the Building)
- In India, it is not possible to reach all homes with fibre as such some homes may be reached by wireline/ wireless technologies viz. ADSL or WiMax

Future NGN Architecture



Source : ITU Website

Thank You

ddgvas@bol.net.in