Convergence of Telecom & Broadcasting Sectors

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• Overview of Indian Economy.
• Indian Telecom Market – Size & opportunity.
• Aspirations of Customers, Operators & Vendors.
• Need for Convergence & future business strategy
• Telecom Next Generation Networks (NGN).
• Broadcasting & Cable Services.
• Advantages of Convergence.
Estimated GDP Growth is about 7 to 8% during current year.

Growth led by 9.6 % rise in Services Sector.

Services Sector has emerged as most significant sector – contributing nearly 55% to GDP.
INDIAN TELECOM MARKET

- Second Largest Mobile Telecom Country with >340 Million Mobile Customer Base

- Fastest Growing Telecom Nation in the world – growing @ 9-10 million connections per month.

- Compounded customer growth of around 36.6 % p.a. for the last 5 years.
• Rising Mobility, Declining fixed line.
• VAS emerging as major Revenue Earner.
• Growing popularity of Internet and Broadband.
  ➢ 100.51 million internet customers (including wireless subscribers) at the end of September 2008.
  ➢ 5.5 million Broadband Customers at the end of December 2008.
INDIAN TELECOM MARKET

- Population - Approx. 1.15 Billion

**Teledensity**
- Overall - 32.31%
- Urban - 75%
- Rural - 13.5%

- Expected Telephone subs. Base - 500 mn by 2010
- Expected Broadband Base - 20 mn by 2010
- Expected annual Revenue - $45 billion by 2010
LEGACY TELECOM NETWORKS

- Separate Network for each service
- TDM Switches: Local & Long Distance
- PDH / SDH Transmission links.
- Not designed to handle DATA.
Separate slots for each service...
Mobile Network

subs

mobile services
Data Network

subs

Data services
How we do multiple services now?

We have a separate network (access / aggregation / core, AAA, Provisioning) for each service vertical. Opex is very high. The network has to track user for his Presence/Location and preference for terminals. Doing this through vertical silos does not make the business case anymore.
Problems of Existing Network for Telcos

- Slow to develop new features and capabilities.
- Expensive upgrades and operating expenses.
- Proprietary vendor troubles.
- Large power and cooling requirements.
- Limited migration strategy to New tech.
- Product/model obsolescence.
Operators Want

- More Customers
- Reduced Cost
- New Services
- Increased Revenue
- Harmonized Networks
- Fast to Market
Vendors Want

- More Customers
- Increased Revenue
- Reduced Cost
- Harmonized Equipment
- New Products
- Brand Recognition
Customers Want

New Services
Value for Money or at Less Cost

Personalization
Simplicity

Mobility
Freedom
AND MOST IMPORTANTLY A CUSTOMER WANTS ONE BILL
In other words CONVERGENCE is the need of the hour.
The solution is here ...

A Horizontally-integrated Network

- Video Services (TV, movie, etc)
- Data Services (WWW, e-mail, etc)
- Telephone Services

NGN Services
- Point to point, Point to multipoint, Multipoint to multipoint

NGN Transport
- Point to point, Point to multipoint, Multipoint to multipoint

ITU-T Recommendation Y.2011

VERTICALS BROKEN INTO HORIZONTALS AND INTEGRATED TOGETHER IN HORIZONTAL STRATA. ONE COMMON IP BASED IMPLEMENTATION !!!
Convergence – Core of future business strategy for telecom sector

**Voice and Data**
- A true multi media experience which will transform the way we communicate

**Fixed and Mobile**
- A fusion which allows customers to enjoy the best of both worlds

**Comms and IT**
- Enabling businesses to deliver the most appropriate information or communication when and where required

**Media & entertainment**
- Reinventing home entertainment with IPTV, UNICAST & MULTICAST Service
This Convergence and need of fast deployment of new services gives birth to

NEXT GENERATION NETWORKS
(NGN)
So…. What is NGN?
(From Common man’s point of view)

- Next Generation Services – Converged (quad-play, voice, data, video, mobile)
- Next Generation Access – High speed (Broadband) IP based connectivity (ADSL, VDSL, Wi-Max, Cable TV, FTTH, Entertainment).
- Next Generation Transport – Ethernet, IP-MPLS
- Next Generation Architecture – Service oriented, layered (transport, control, application)
- Next Generation Mobile – 3G+
- Next Generation Internet – IPv6
- Next Generation Interconnect – Capacity and Quality based
- Next Generation Licensing – Unified
Key Characteristics of NGN

- Packet-based network (generally IP).
- Interworking with legacy networks via open interfaces.
- Generalized mobility (User/Terminal/Access)
- Independence of service-related functions from underlying transport technologies i.e. no separate vertical for each service
- Multiple parallel sessions from same user for various services
Next generation networks

Present Day Networks

Next Generation Networks (NGN)

Gateways

Internet

Wireless

Telephone System

Integrated Services Over IP

Evolving towards IP Communications
Mobility and Convergence Vision
- anywhere, anytime, anyplace

CONVERGENCE IS ABOUT SERVING A CUSTOMER SEAMLESSLY THROUGH DIFFERENT ACCESS NETWORKS
Like Telecom Sector, Broadcasting & Cable Services have been opened for Private participation.

Broadcast & Cable services being provided through All India Radio, FM Channels, Community Radio Stations, Cable TV, Satellite TV Channels, DTH & IPTV.

Multi System Operators (MSOs) across the country providing Cable TV services.
BSNL & MTNL are providing IPTV service through Broadband Cable in 19 Cities with a total of 15000 customers.

BSNL plans to extend IPTV service to a total of 100 cities by March 2009.

Airtel & Reliance have recently started DTH Services.

Vodafone plans to launch DTH shortly.

India is on the threshold of Mobile, TV, DATA & Video convergence.
Advantages of Convergence

- One infrastructure is required.
- One backbone for voice and data services instead of two parallel ones.
- No maintenance of proprietary switching systems.
- Fewer call controlling entities in the network so less capital and operating cost.
- Easier configuration of equipment.
- Fast advanced and new services deployment is possible.
THANK YOU