NGN Standards overview and Workshop Objective

Chae Sub Lee
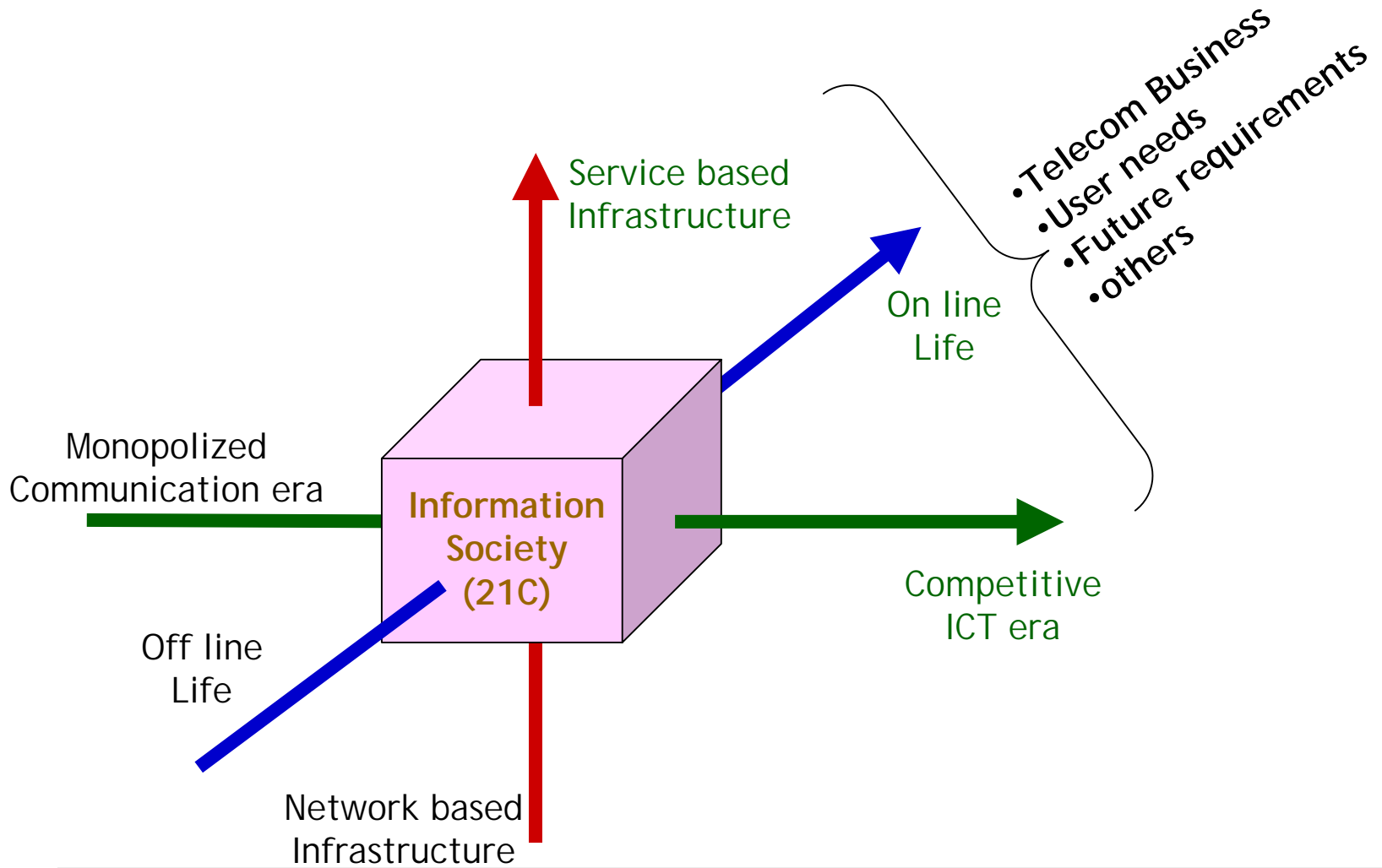
(Chairman of WP2/13, ETRI, Korea)

Contents

1. Why need NGN?
2. NGN and its Standards
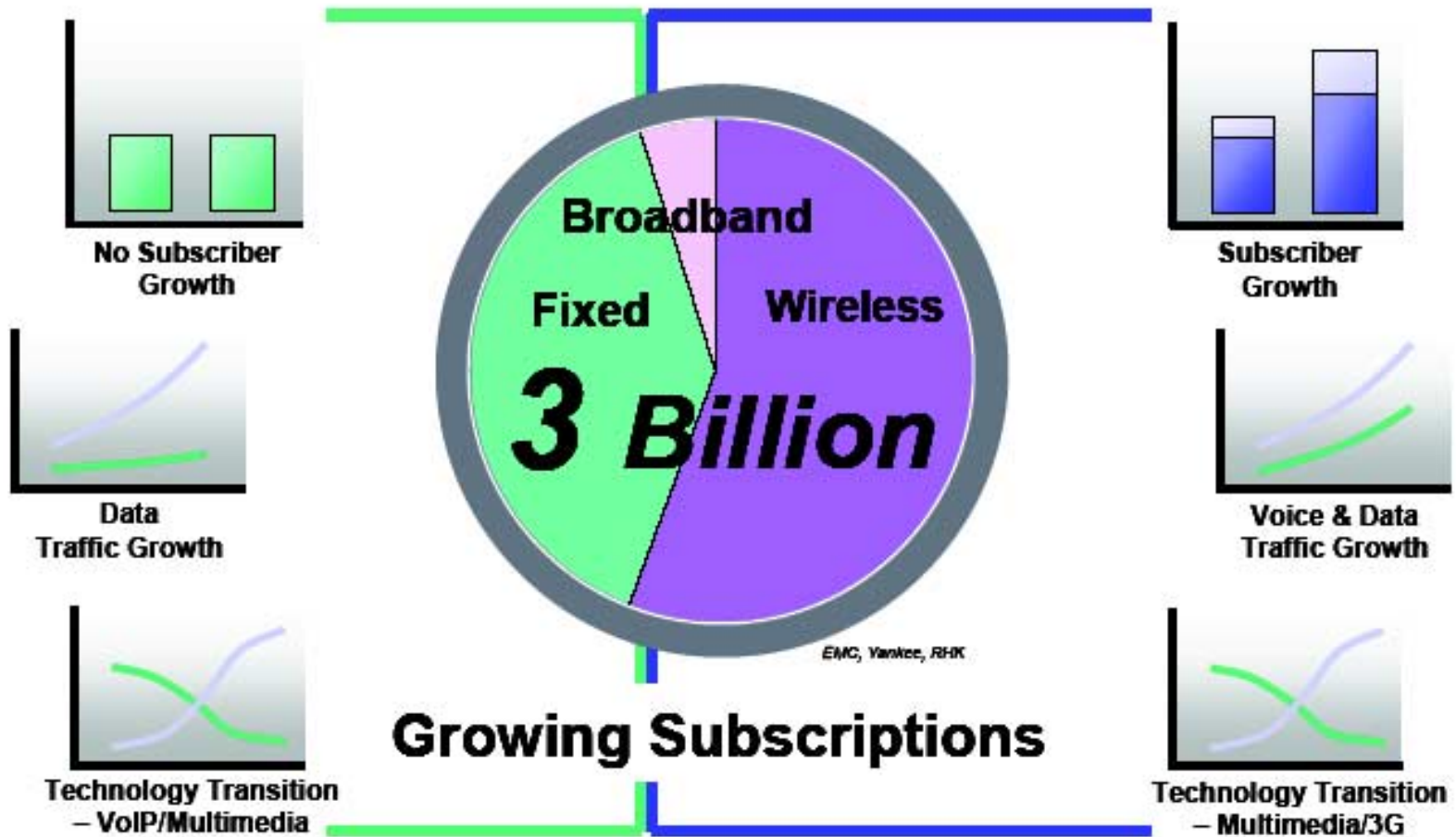3. Objectives of today

Success, Problems or Dilemmas?

Service based
Infrastructure

On line
Life

- Telecom Business
- User needs
- Future requirements
- others

Monopolized
Communication era

Information Society (21C)

Competitive
ICT era

Off line
Life

Network based
Infrastructure

# Telecom Market Today

What is keeping SP CEOs awake at night?

o Revenue is saturated or declining for most core products

o Competition is increasing in all markets

o Google, Skype et al are creating a new kind of competitive landscape

o Costs are too high

o We need a solution NOW

*Source : "NGN: an answer to all end users' problems?", Chris Lewis, NGN Industry Event, London, UK 11.2005

But even Mobile Business...

## ARPU of SK Telecom in Korea

Source: SK telecom
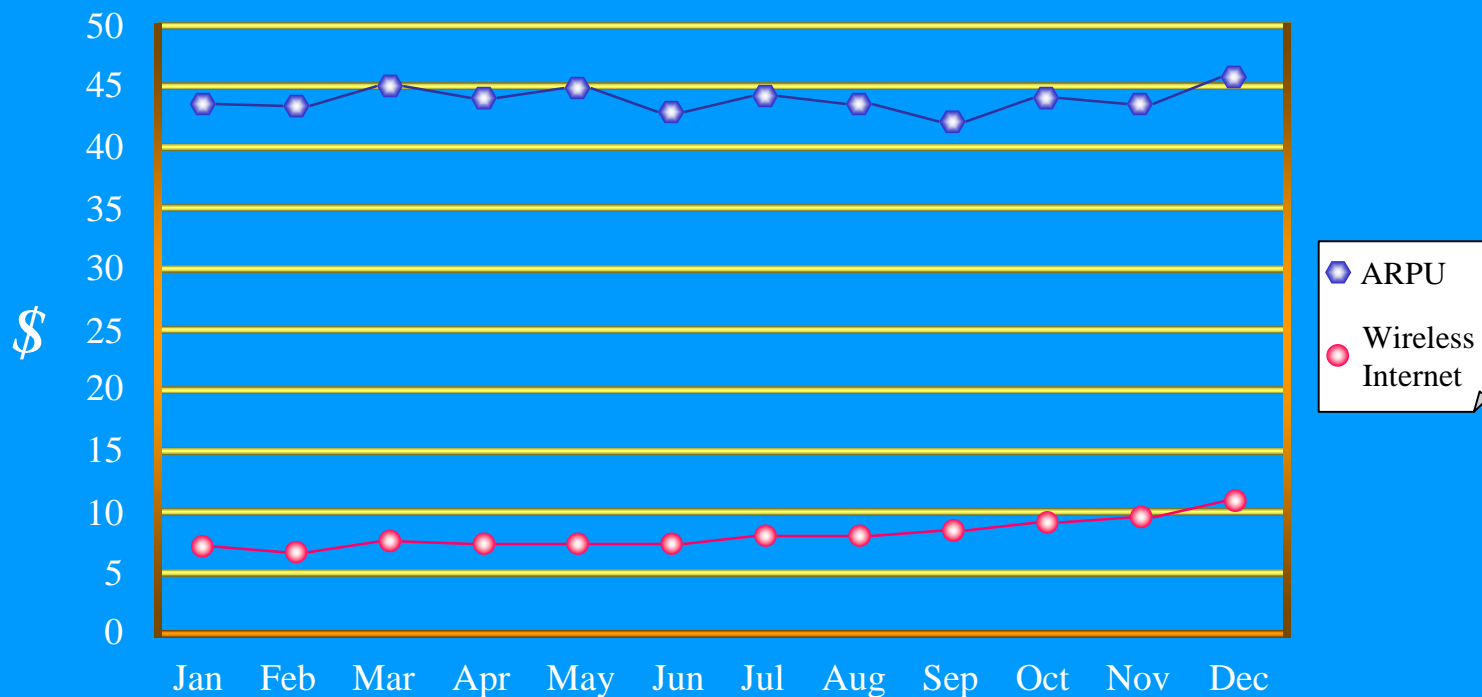
ARPU Analysis

o Analysis means

- Subscribers saturated in Korea
- ARPU increases little and little slightly
  - Voice revenue keeps stagnant
  - Wireless data revenue has jumped three fold over the past three years
  - But ARPU doesn't increase that much because of price reduction

No clear reason, but want.....

What is the main benefit of FMC for telecom service providers?
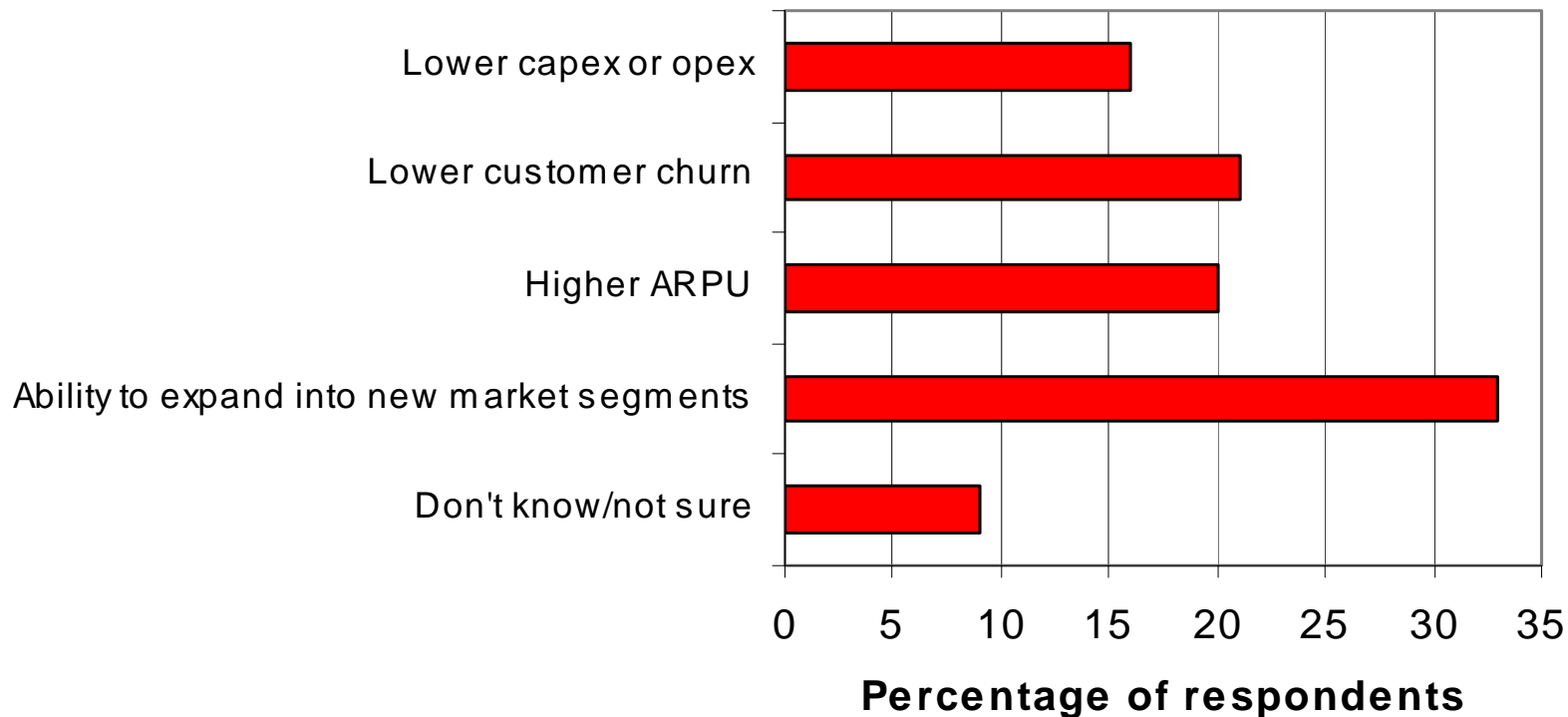
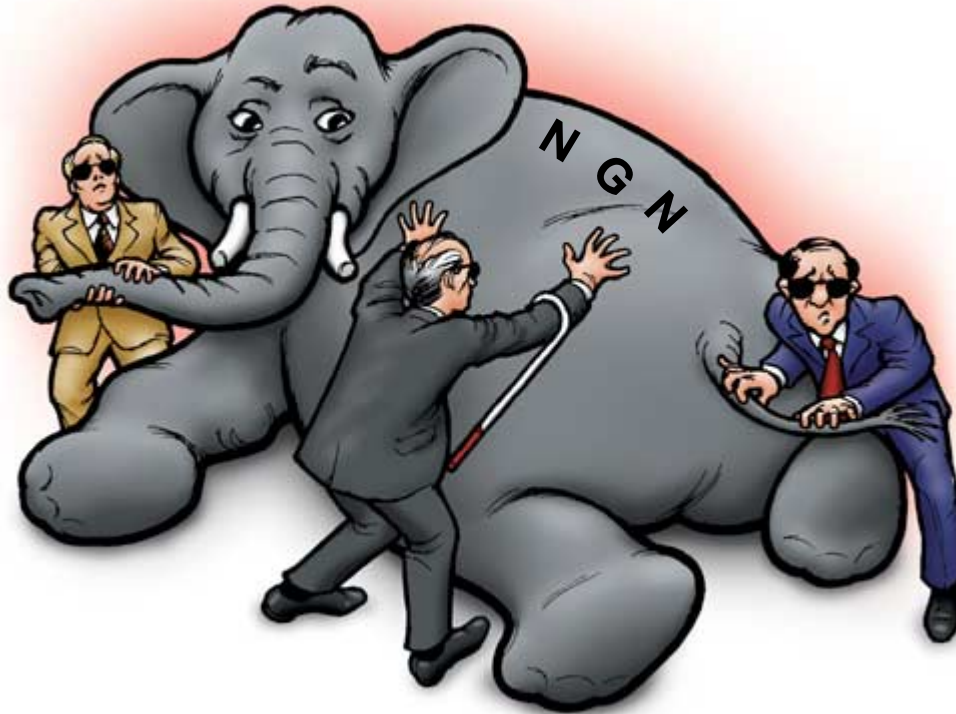*Source : "NGN, IMS and FMC", Graham Finie, NGN Industry Event, London, UK 11.2005

Everybody needs next, so… NGN

Integrated Engineering

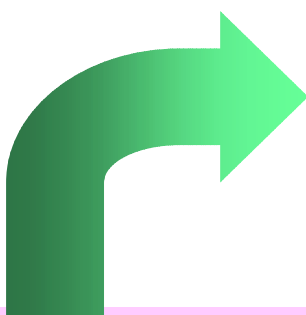Moves, adds and changes

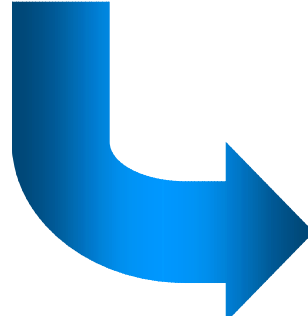Mobile Workers

Intelligent Office

Teleworking

*Source : "NGN: an answer to all end users' problems?", Chris Lewis, NGN Industry Event, London, UK 11.2005

NGN in 4 words...

- by Fixed
- by Mobile
- by Wireless

NGN = Broadband Managed IP Network

- for Services
- for Businesses
- for Players
- for Users

Objective of ITU-T NGN

- Provide <u>both Customer and Provider</u> facilitated provision to support services <u>over wireline and wireless</u> broadband accesses
- Support the desire of customers to be able to access their <u>services from anywhere</u> (inherent mobility)
- Facilitate <u>to merge diverse network services</u> – data (web browsing), voice, telephony, multimedia and emerging "popular" internet services such as Instant Messaging and Presence and broadcast type services
- Support a <u>flexible platform</u> for service delivery

NGN is ...

not

Next Generation Internet

the IMS based network

only for a Fixed nor a Mobile network

any more best duties

any more closed public network

only for usage awareness

but

Next Generation Public Telecommunication Net.
IMS is a core part of NGN

Converged capabilities btw. Fixed-Mobile (FMC)

guaranteed duties

fully open I/F in access-core and service-transport

support various businesses

Deliverables from FGNGN

**NGN Definition and Features
(ITU-T Rec. Y.2001, 2011)**

**Scope
+
Service
Req.
+
Capa.

(4)**

Quality of Service aspects
(9)

Control of QoS (1)

Resource Adm./Cont. aspects
(1)

Security aspects (2)

Migration aspects (3)

General

Funct.

Archit.

(7)

Future Packet Based Networks (4)
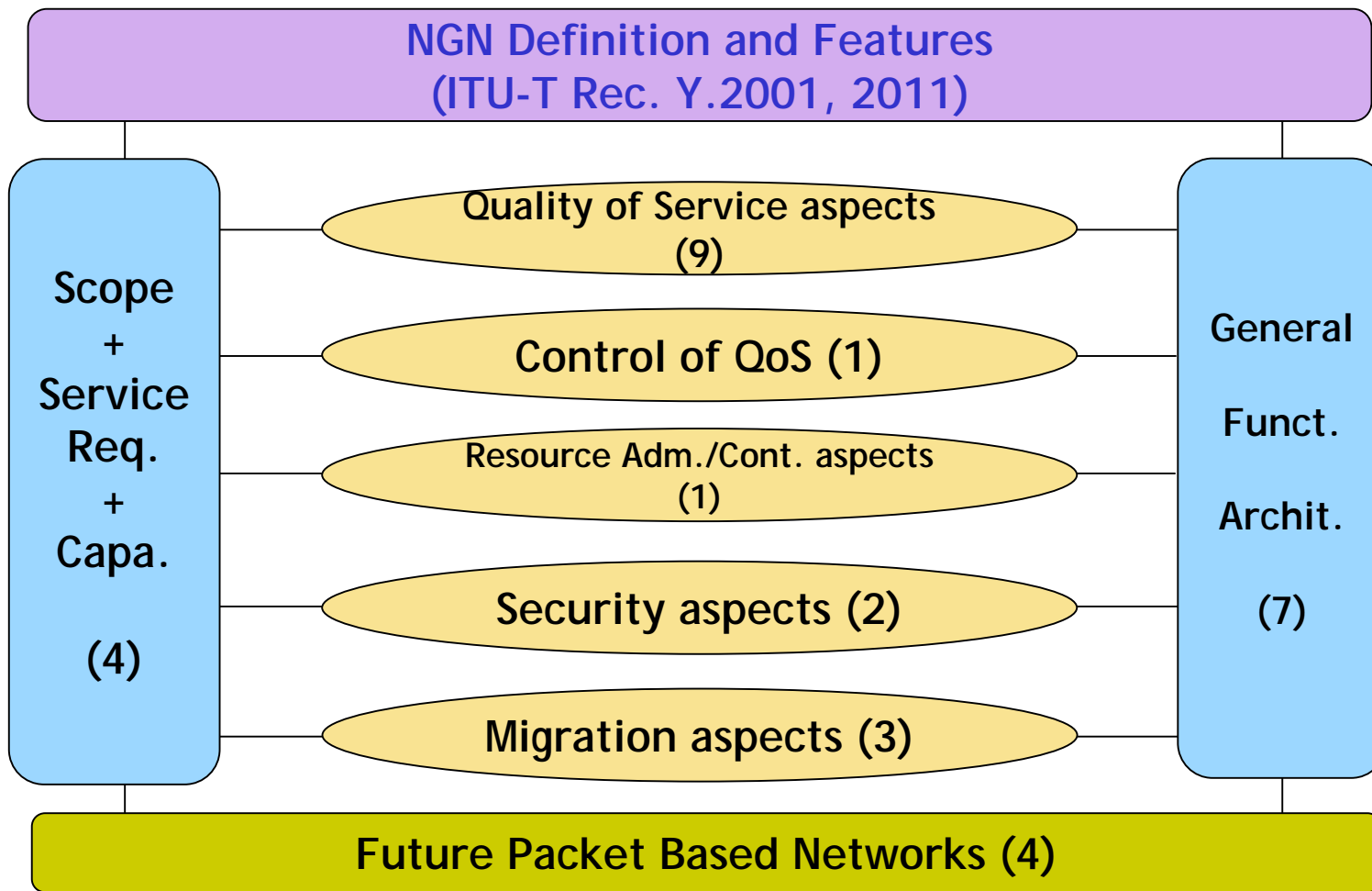
Impacts of NGN Standards

Business/Application oriented projects

| Limited Services |
| BE IP |
| Limited BB |

NGN →

| FMC | RFID | IPTV | -------- | Others |

Managed IP

Converged Broadband
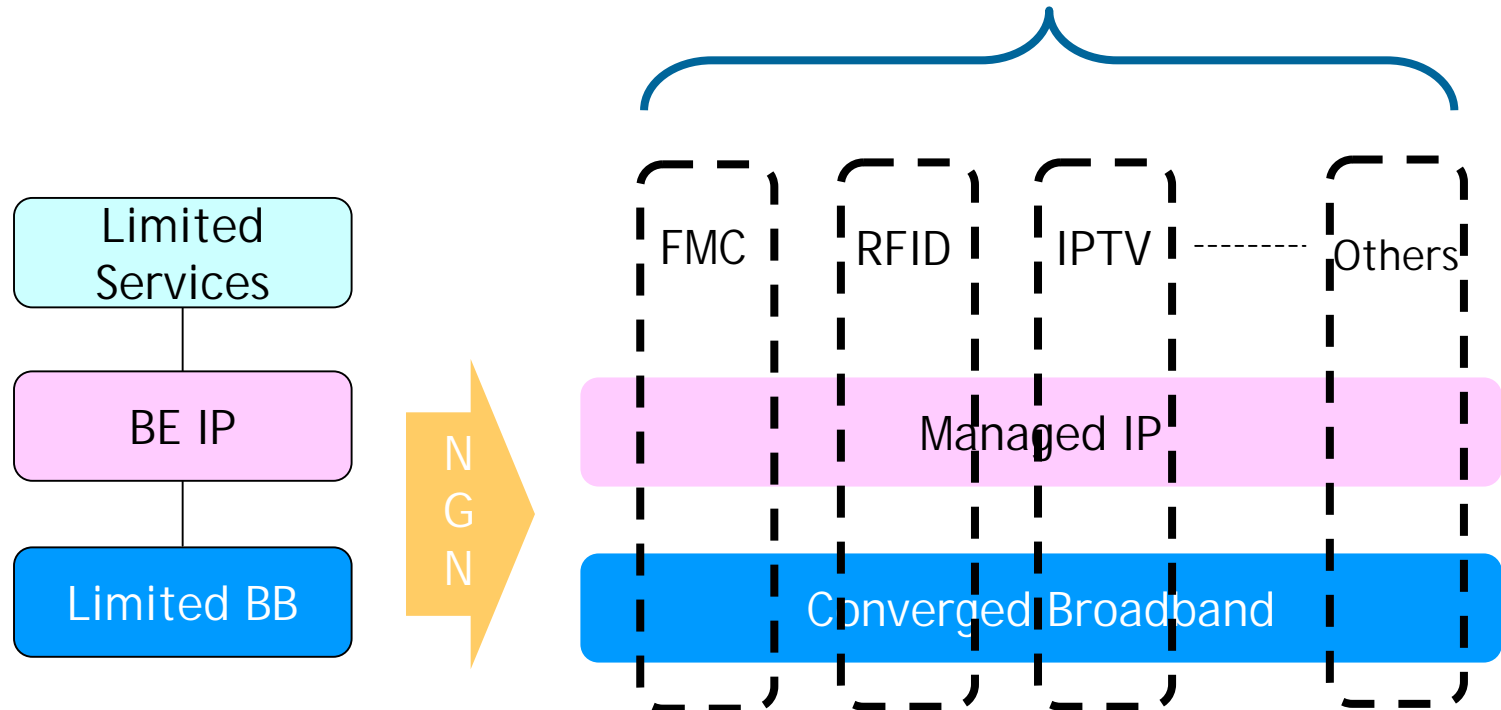
•Simple linkage btw layers
•Simple business relationships
•Simple players

•Simple linkage btw layers with dynamics
•Diverse and Flexible business relationships
•Diverse business models and players

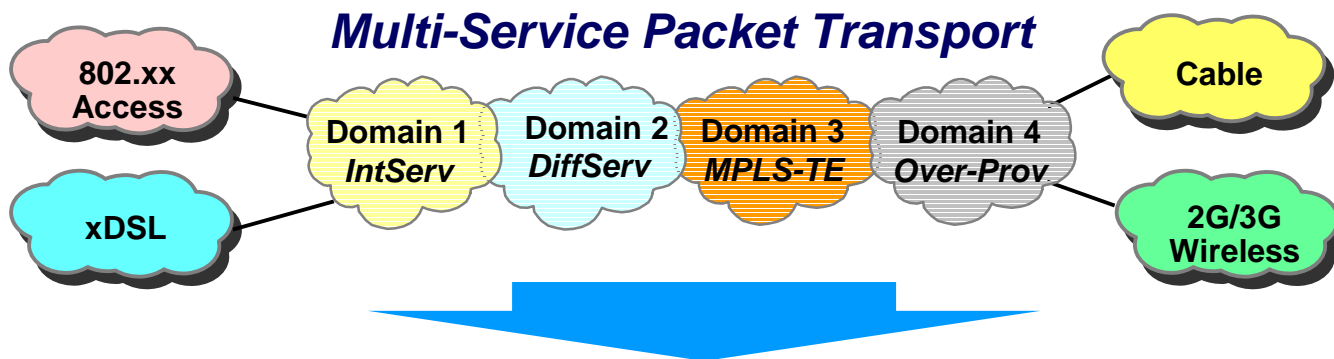# Overall NGN Architecture

Applications

ANI

Control
Media
Management

Application Support Functions & Service Support Functions

Service stratum

Service User Profiles

Service Control Functions

Management Functions

Requirements

Transport User Profiles

Network Attachment Control Functions

Resource and Admission Control Functions

Transport Control Functions

End-User Functions

Other Networks

Interactions

Transport Functions

UNI

NNI

Transport stratum

Study on NGN over Transport

Multi-Service Packet Transport

Practical Tuning
- QoS
- Control
  - Traffic
  - Resource
- OAM
- etc

NGN-GSI

SG15

Service User Profiles

Service Control Functions

Transport User Profiles

Network Attachment Control Functions

Resource and Admission Control Functions

Transport Control Functions

Access — Core 1 — Core 2 — Access

802.xx Access

xDSL

Domain 1 IntServ

Domain 2 DiffServ

Domain 3 MPLS-TE

Domain 4 Over-Prov

Cable

2G/3G Wireless
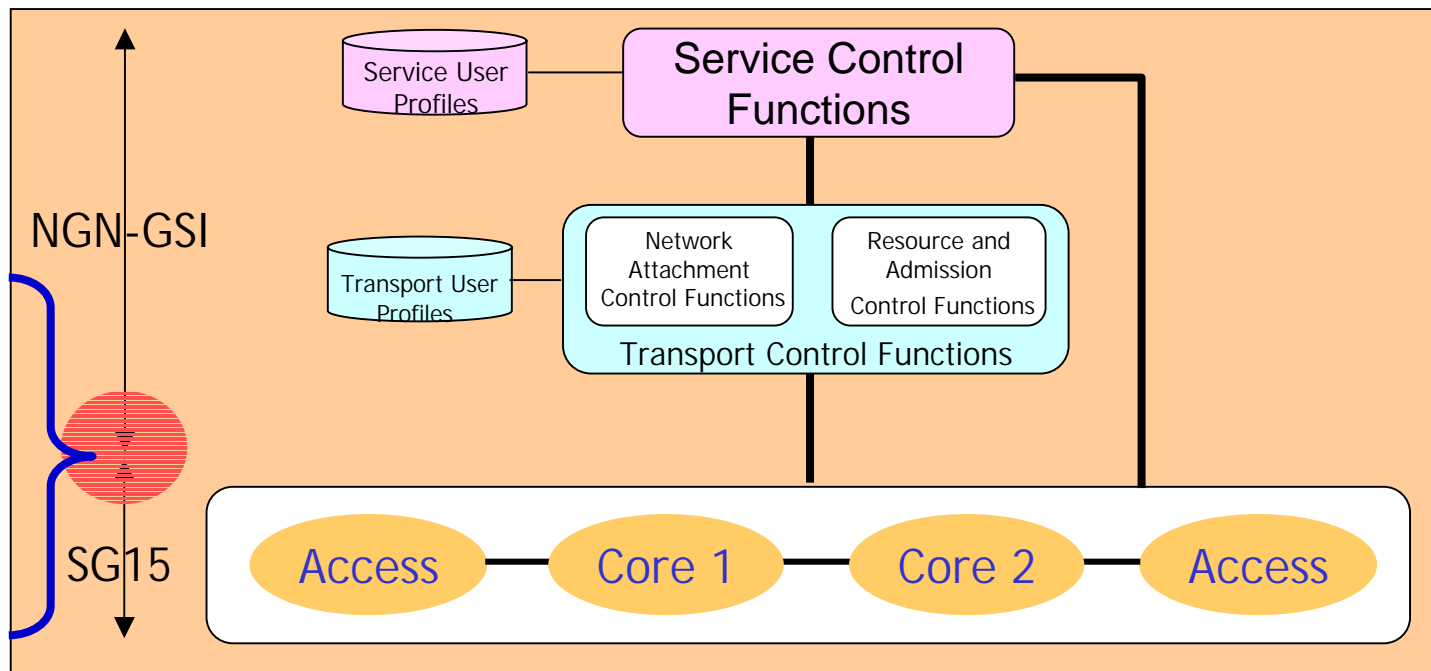
Thank you
for your attention !!!