NGN Standardization Activity in ITU-T

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Structure of FGNGN

- **ITU-T Director launched NGN Focus Group at June 2004**
- **A meeting at almost every two month : 6, 7, 9, 11/2004 + 3, 5, 7, 9, 11/2005**
- **Results and Remaining works could be transferred to relevant SGs by SG13**

WG	Area	Deliverables
WG 1	SR (Service Requirements)	**Development of scope, service requirements and capabilities according to Release Plan**
WG 2	FAM (Functional Architecture, and Mobility)	**Development of Functional Architecture in general and specific instance views including Mobility aspects**
WG 3	QoS	**Development of End-End QoS releated deliverables including network performance aspects**
WG 4	CSC (Control & Signalling)	**Development of control related standards support QoS include Resource Admission and Control aspects**
WG 5	SeC (Security Capability)	**Development of Security Framework under NGN environment**
WG 6	Evol (Evolution)	**Evolution of PSTN/ISDN into NGN**
WG7	FPBN (Future Packet-based Bearer Network)	**Identify problem states of current packet based network and development of Future Packet Network requirements**

Statistics of FGNGN Meetings

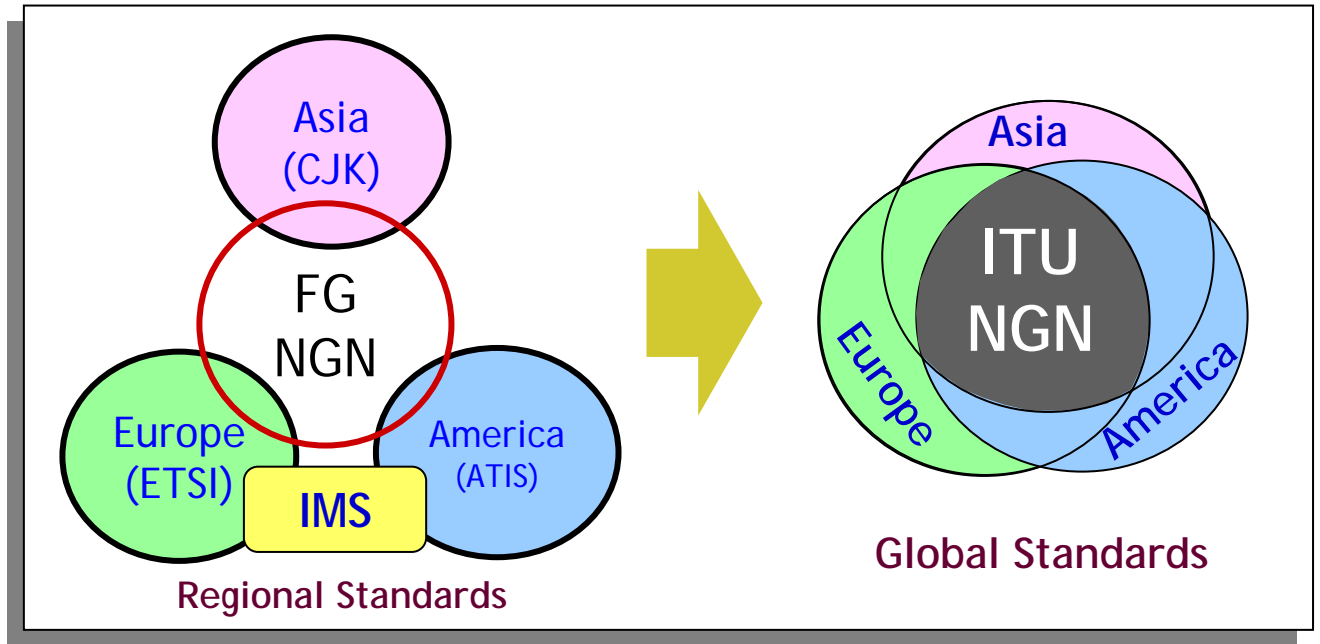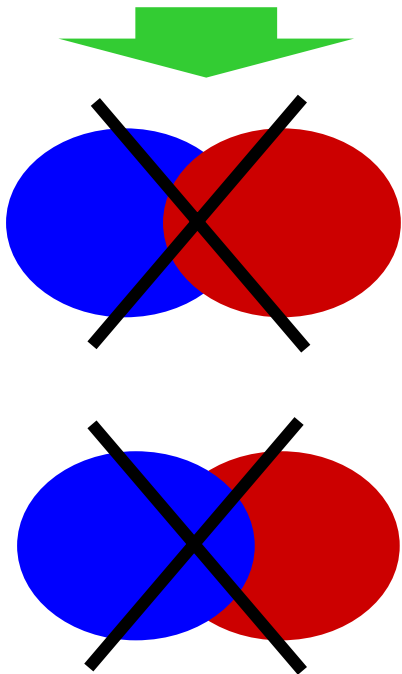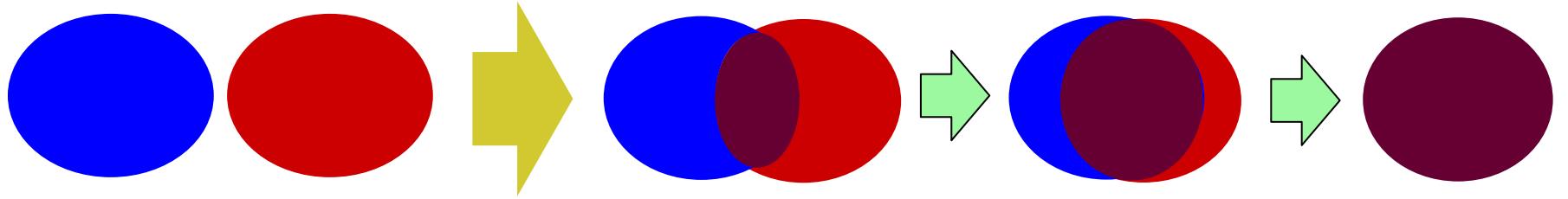|	Date/Place	Input Document	Participants
1st	June 04/Geneva	39	99
2nd	July 04/Geneva	66	66
3rd	September 04/Ottawa	141	121
4th	December 04/Geneva	125	123
5th	March 05/Jeju	174	144
6th	April 05/Geneva	142	144
7th	June 05/Beijing	175	174
8th	August 05/Geneva	187	145
9th	November 05/London	157	150
Total		1,206	1,166

Convergence in FGNGN Meetings

Feature of Convergence

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)
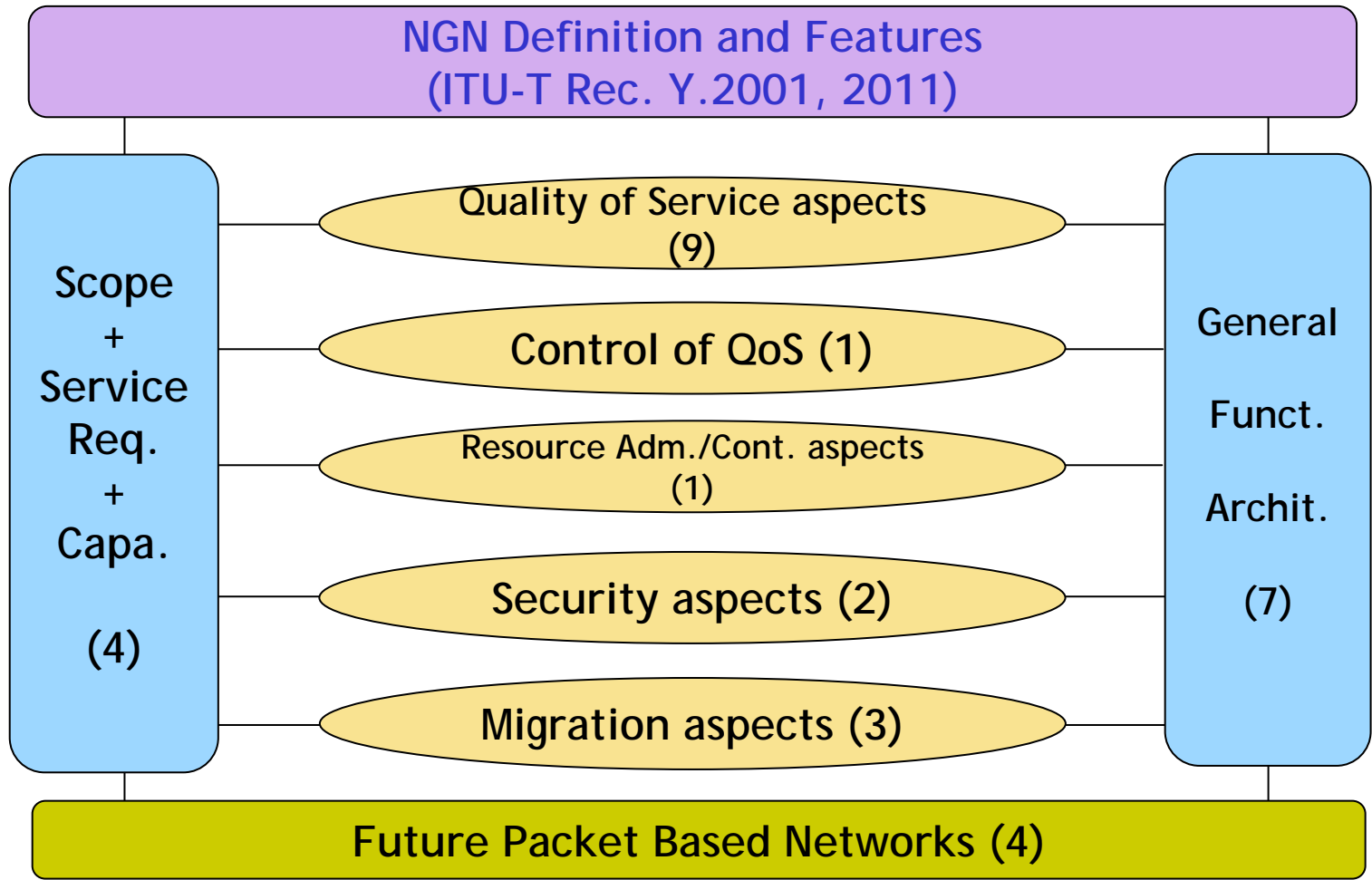
Major coverage of NGN Release 1

QoS Aspects and one part of Control aspect
(IP QoS signaling Requirement)

Release 1 coverage
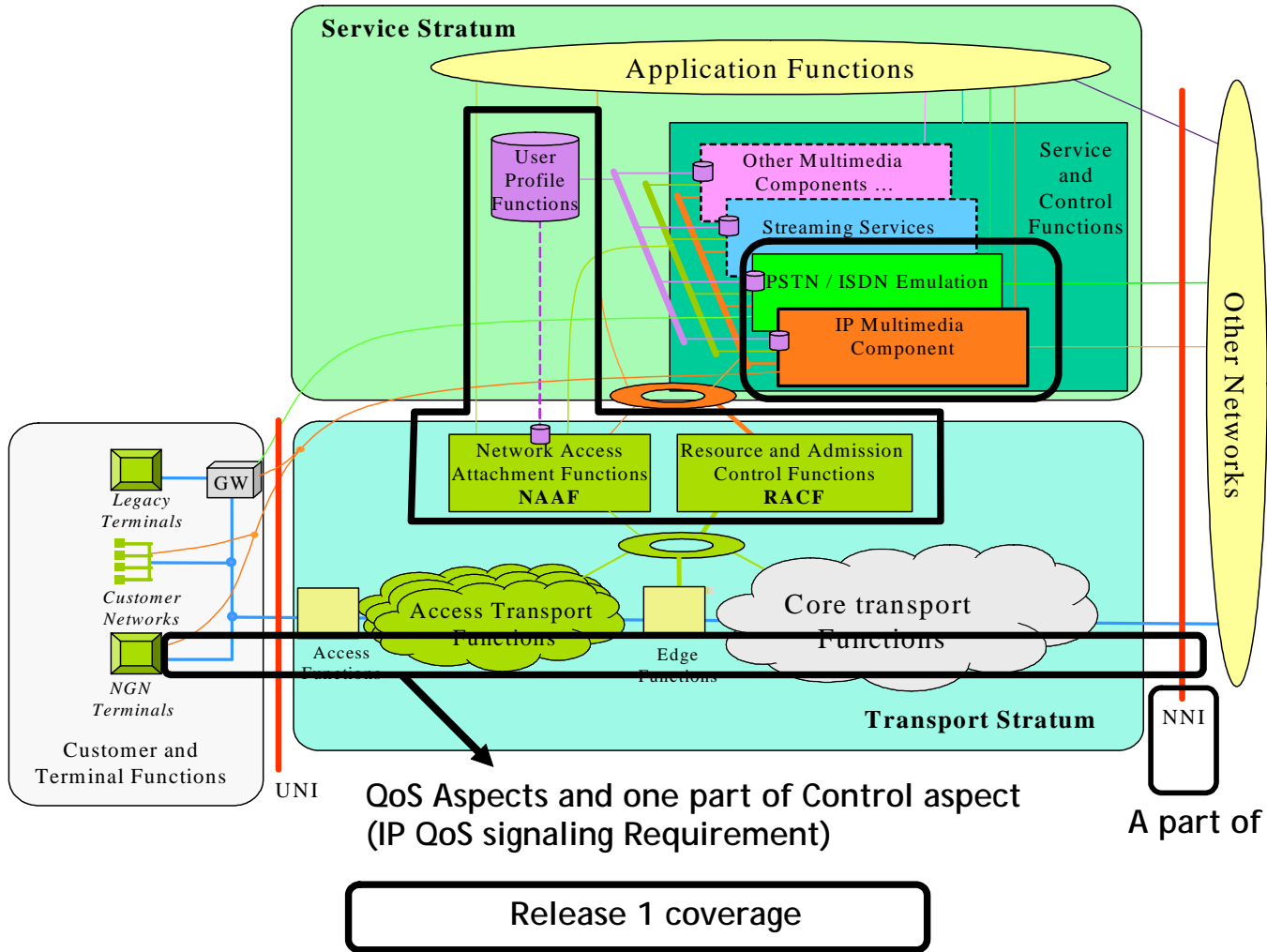
Key Principles of NGN

- **Open architecture**: open to support service creation, service updating, and incorporation of service logic provision by third parties and also support "Distributed control" as well as enhanced security and protection.
- **Independent provisioning:** service provision process should be separated from network operation by using distributed, open control mechanism to promote competition.
- **Multiplicity**: The NGN functional architecture shall offer the configuration flexibility needed to support multiple access technologies.

ITU-T 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 key part of NGN

Converged capabilities btw. Fixed-Mobile (FMC)

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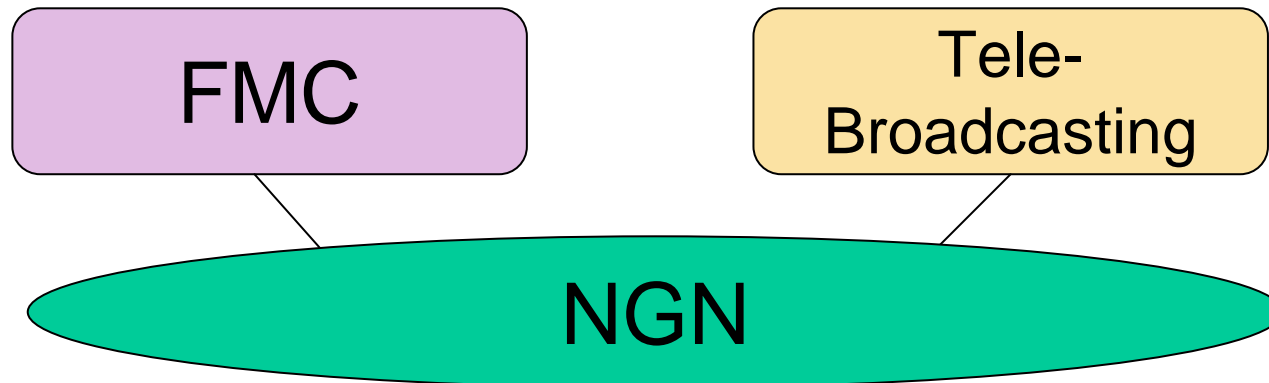
fully open I/F in access-core and service-transport

support various businesses
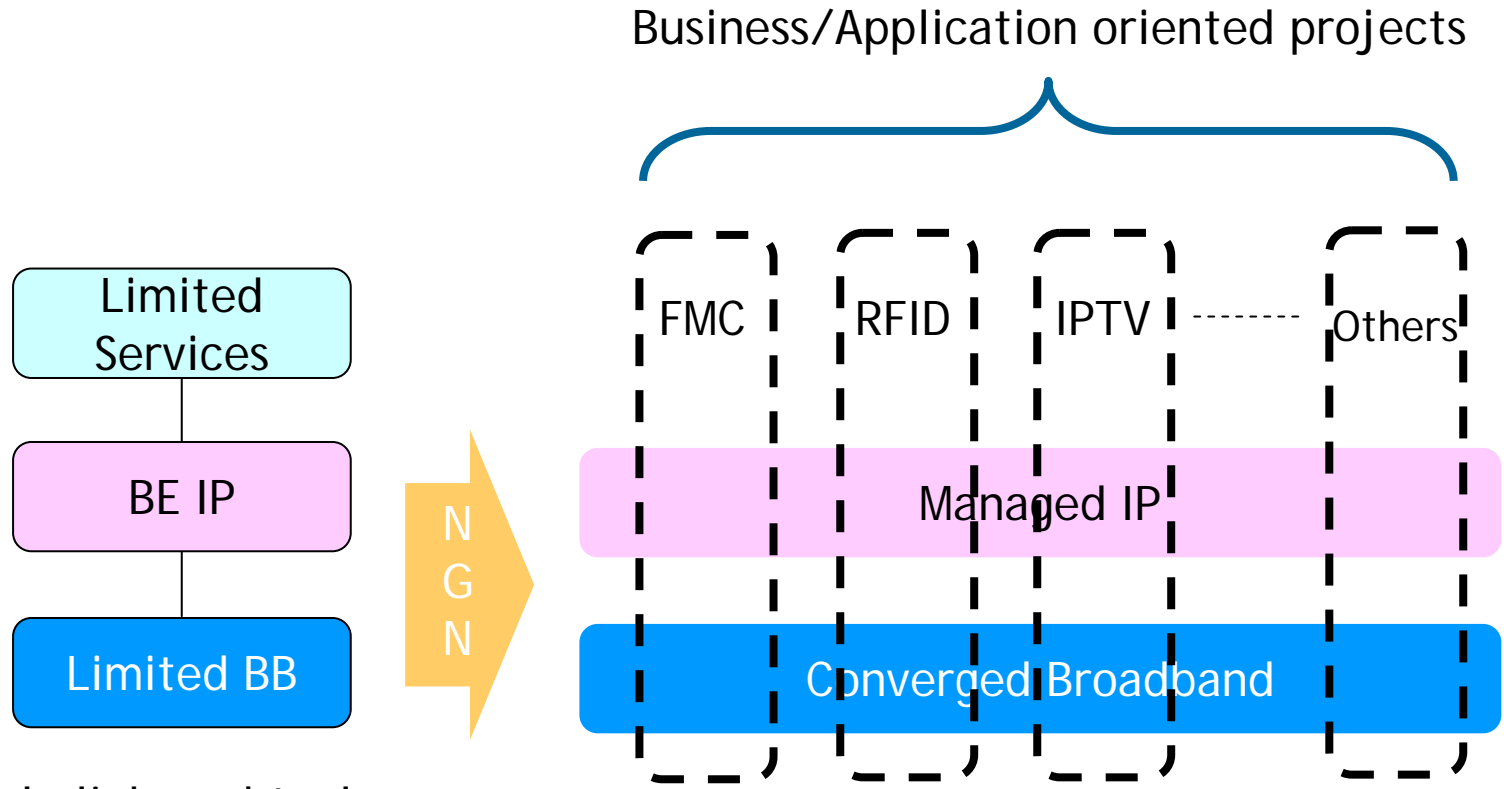
NGN; a Convergence Platform

- Combination IP with Broadband accelerating intrinsic convergence
  - Service convergence: Web based service provisioning
  - Network convergence: IP over any broadband transport networks
- Advanced Mobile and Wireless technology initiate business convergence such as Fixed-Mobile convergence
- Broadband Fixed, Wireless and Mobile technology boost another business convergence, called "Multiple Play: Tele-Broadcasting"

NGN; Enablers for Convergence

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

Why need NGN-GSI?

o The need to have <u>a visible focus</u> for the NGN work and to maintain <u>the co-location</u> of the closely related NGN work

o The ongoing work will be done by the Study Groups, <u>meeting together</u> according to an NGN work plan coordinated by SG13 <u>under the banner of the NGN Global Standards Initiative (NGN-GSI)</u>*
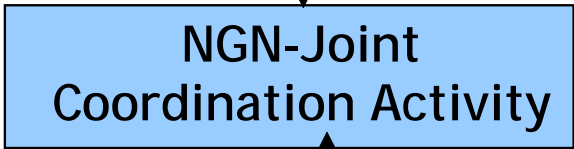
* See http://www.itu.int/ITU-T/ngn/index.phtml

NGN-GSI Overall Structure

GSI: Umbrella over the NGN standardisation programme

NGN Global Standards Initiative (led by SG13)

SG13 NGN project planning

JCA: ITU-T, GSC PSO's and IETF managers: oversees coordination and planning of work

NGN-Joint Coordination Activity

TSR: Review results, identify issues to JCA

Technical & Strategic Review (TSR)

Technical standardisation work

SGs

ETSI

TIA

ATIS
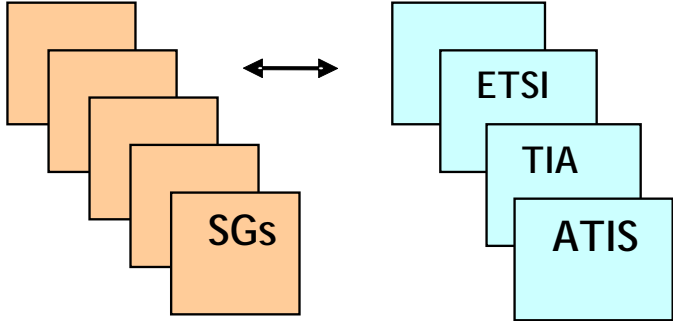
NGN JCA and TSR

o An NGN Joint Coordination Activity (NGN-JCA) involving the leaders of the work in the Study Groups and representatives from other standards organisations who are involved in NGN activities will oversee the coordination, planning and strategic direction of the ongoing work

o At each NGN-GSI event a 'Technical and Strategic Review' will be held where results can be shared amongst the participants and NGN technical coherence and strategic / coordination issues can be raised

Status of NGN-GSI Coordination

NGN-GSI, Today's ITU-T NGN

NEXT GENERATION NETWORK

NGN-GSI

GLOBAL STANDARDS INITIATIVE
ITU-T
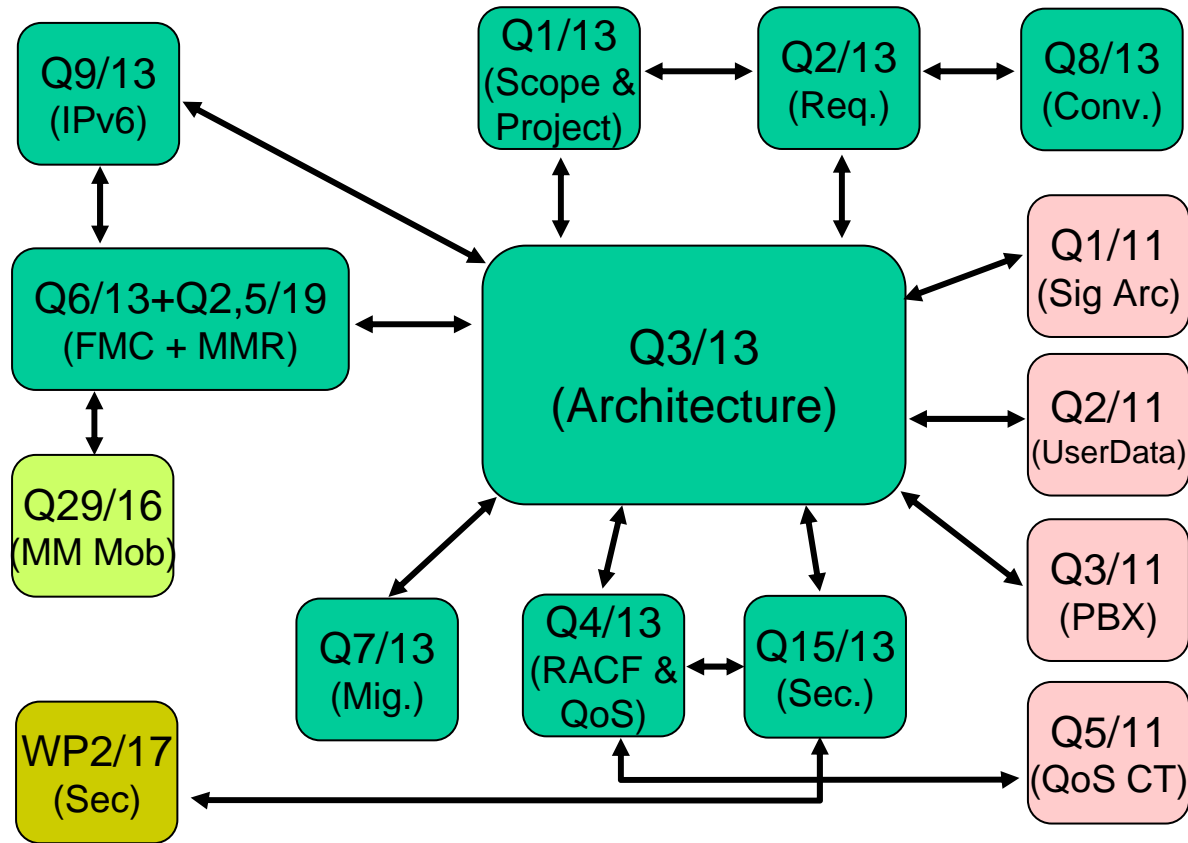
- **Co-located Joint Activity : SG 11 + 13 + 19 and 2 + 12 + 16 + 17**
- **Coverage**
  - **Release 2 Services and Capabilities**
  - **Functional Architectures and Requirements**
  - **Mobility Management and FMC**
  - **IPv6 application into NGN**
  - **End-End QoS**
  - **NGN Signaling with Resource Admission Control**
  - **Migration and Interworking aspects (inc. IWF)**
  - **NGN Securities**
  - **Home Networking**
  - **Networked aspects of Identification services**
  - **Others**

Workshops on NGN

o The following workshops have been held:

- NGN Industry Event, London, 18 November 2005

- Joint ITU-T/ATIS workshop on NGN Technology and Standardisation, Las Vegas, 19-20 March 2006

- Workshop on NGN and its Transport Networks, Kobe, 20-21 April 2006

- Workshop on NGN, Hanoi, 15-16 May 2006

o Joint ITU-T/GGF workshop on NGN and Grids to be held in Geneva, 23-24 October 2006

NGN-GSI, Status of NGN R1 Recs.

Recommendations for AAP

ITU-T Rec. No.	Q	Base text	Status	Title
Y.1315 (Y.vpn-QoS)	2	TD 226 (PLEN)	New	QoS support for VPN services – Framework and characteristics
Y.2012 (Y.NGN-FRA)	3	TD 194 (PLEN)	New	Functional requirements and architecture of the NGN
Y.2021 (Y.IFN)	3	TD 219 (PLEN)	New	IMS for Next Generation Networks
Y.2031 (Y.PIEA)	3	TD 220 (PLEN)	New	PSTN/ISDN emulation architecture
Y.1571 (Y.CACPriority)	4	TD 208 (PLEN)	New	Admission control priority levels in Next Generation Networks
Y.2111 (Y.RACF)	4	TD 205 (PLEN)	New	Resource and admission control functions in Next Generation Networks
Q.1706* (Rec.MMR)	6	TD 190 (PLEN)	New	Mobility management requirements for NGN
Y.2261 (Y.piev)	7	TD 201 (PLEN)	New	PSTN/ISDN evolution to NGN
Y.2271 (Y.csem)	7	TD 203 (PLEN)	New	Call server based PSTN/ISDN emulation
Y.2091 (Y.term)	11	TD 192 (PLEN)	New	Terms and definitions for Next Generation Networks

NGN-GSI, Status of NGN R1 Recs.

Recommendations for TAP

ITU-T Rec. No.	Q	Base text	Status	Title
Y.2201* (Y.NGN-R1-Reqts)	2	TD 223 (PLEN)	New	NGN release 1 requirements
Y.2701 (Y.NGN Security)	15	TD 206 (PLEN)	New	Security requirements for NGN release 1

Supplements

ITU-T Rec. No.	Q	Base text	Status	Title
Supplement 1 to Y.2000-series	1	TD 193 (PLEN)	New	NGN release 1 scope
Supplement 1 to Y.2012	3	TD 221 (PLEN)	New	Session/border control (S/BC) functions

Objectives of NGN Management Focus Group (NGNMFG)

o Established by ITU-T SG 4 in Sept 2004 at FGNGN request to support NGN Release 1

o Involves leaders and other participants of major SDOs, forums, and consortia

o Focused on the following (FCAPS*) management interfaces:

- Network Element – Management System
- Management System – Management System

* FCAPS - Fault, Configuration, Accounting, Performance, and Security Management

Status of NGNMFG

o Updating NGN Management Specification Roadmap focused on Release 1 which identifies

- Requirements

- Framework, principles, and architecture

- Interface specifications, both protocol-neutral and protocol-specific

  - Generic information models latest addition

o Identifying specification "overlaps" and stimulating their owners to harmonize them

o Identifying "gaps" and best organization(s) to fill the gaps

NGNMFG Harmonization Activity

o Management architecture: SG4, TISPAN, TMF

o Alarm reporting: TMF, 3GPP, SG4, DMTF

o State management: TMF, 3GPP

o Accounting, charging, and billing

- At request of NGNMFG/SG4, ATIS TMOC and 3GPP SA5 proposed application guidelines

o Ethernet management: SG4, MEF, TMF

o Information Models (many SDOs/forums)

- 2 fold focus: generic, NGN functions

o XML-based framework and models (many SDOs/forums)

Summary of NGNMFG

o **Leadership**
  - Chair: Dave Sidor (Nortel Networks)
  - Vice Chair: Leen Mak (Lucent Technologies)

o **Participation**
  - Open; individuals from founding organizations encouraged
  - Registration required: see

  http://www.itu.int/ITU-T/studygroups/com04/ngn-mfg/index.html

o **Time schedule**
  - Roadmap Version 1 submitted to SG 4: September 2005
  - Roadmap Version 2 to SG 4: May 2006

o **Working methods**
  - Decision-making via consensus
  - Virtual meetings, but Face to Face meetings allowed
  - Any specifications produced are candidates to be SG 4 Recommendations

Scheduled NGN-GSI Events

o The scheduled NGN-GSI events:

- January 2006 Study Group and Rapporteur meetings
- April 2006 NGN Workshop followed by Rapporteur meetings
- July 2006 Study Group and Rapporteur meetings
- October 2006 Rapporteur meetings
- January 2007 Rapporteur meetings
- April 2007 Study Group and Rapporteur meetings
- September 2007 Rapporteur meetings
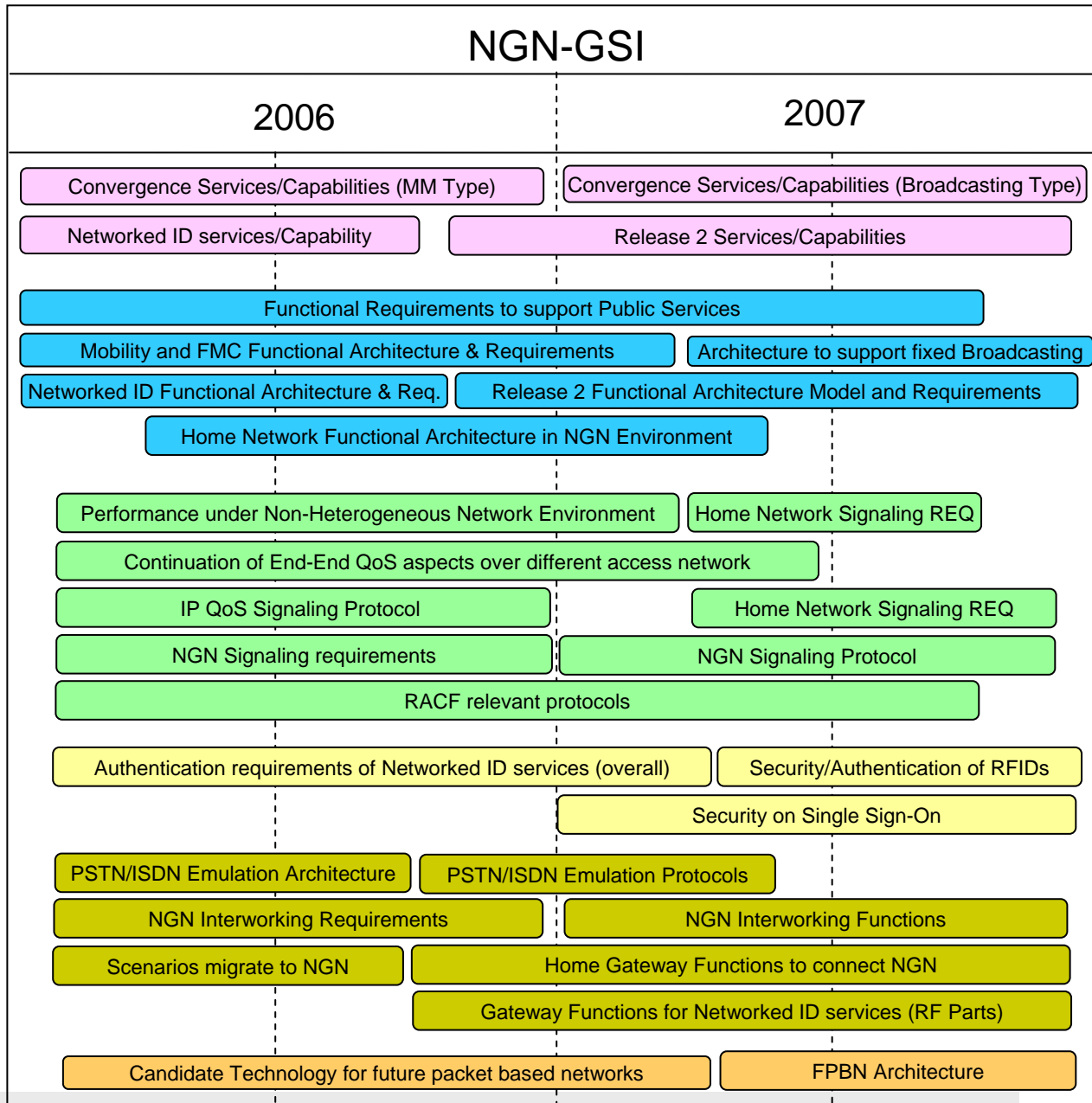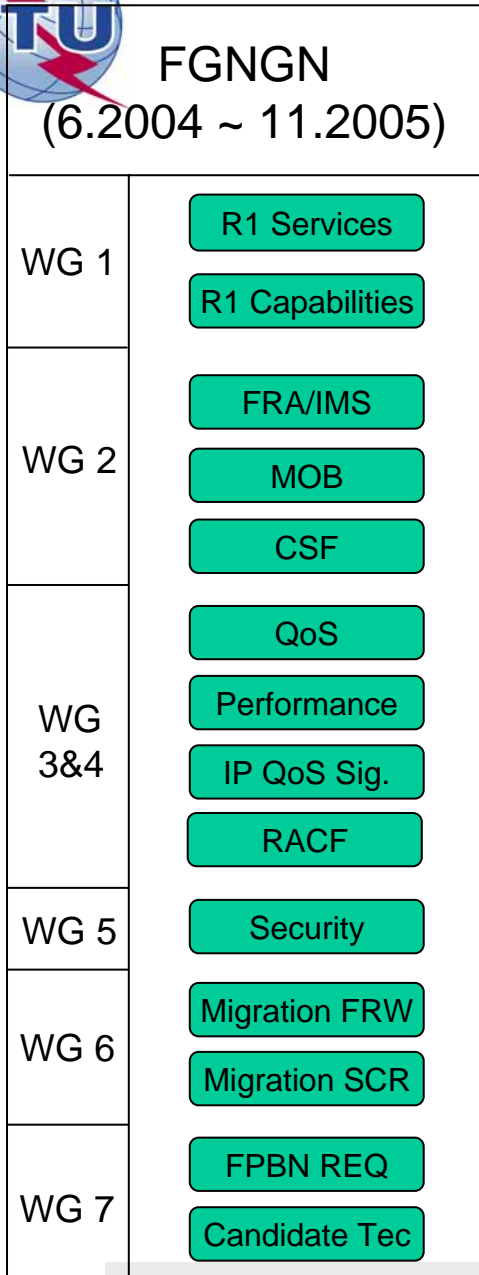- Planning beyond this to be arranged later depending on progress and need

New topics

o The NGN space is expanding. New topics having an impact on NGN include:

- RFID: N-IDs JCA

- IPTV: IPTV Focus Group

- Grids: Global Grid Forum

o The scope of the NGN programme will be expanded to include the necessary standards work
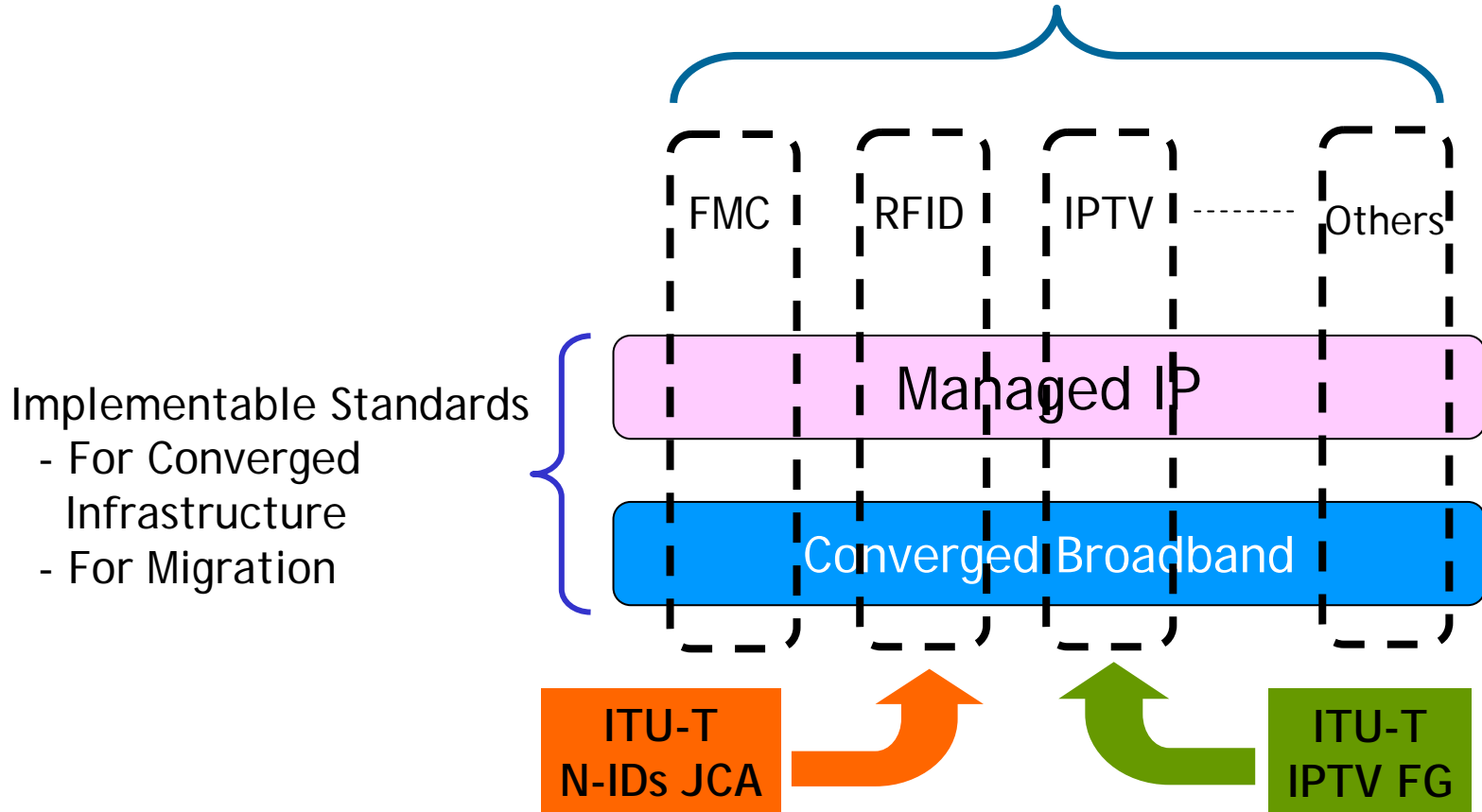
5. Future Activity

Next Direction of NGN Standardization

Construction for Business/Application
(Project oriented approach)

FMC   RFID   IPTV ------ Others

Managed IP

Implementable Standards
- For Converged
  Infrastructure
- For Migration

Converged Broadband

ITU-T
N-IDs JCA

ITU-T
IPTV FG

There is a lot of work behind us, but there is still a lot ahead!

Thank you for your attention **!!!**