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1 ETSI's Early Approach to Globalization

1.1 ETSI's re-engineering process in 1995/6:
New Mission statement:
"Making international Standards
happen first in Europe"
Examples: GSM, DECT, DAB, DVB, TETRA

Some achievements:
o reduce hierarchy in Technical Organization
o delegate power to Technical Organization
o focus on projects and project management
o allow creation of ETSI Partnership Projects
o etc.

20 years GSM, Cyprus, Karl Heinz Rosenbrock

1.2   ETSI's early contacts with Partners

> **GSC/RAST**
> **ETSI TC SMG and ANSI T1P1 (USA)**
>> **GSM 900/1800 AND GSM 1900**
> **RITT (China) joined ETSI**
> **ETSI TC SMG and ARIB/TCC (Japan)**
> **Explanatory mission of ETSI TC SMG to Japan**

1.3   How to make it happen?

> **Create a Committee:**
> **"The ETSI UMTS Globalization Group (UGG)"**

2 The ETSI UMTS Globalization Group (UGG)

2.1 The objectives of UGG

"To consider the actions,

which are required to enable

UTRA and "GSM-based" UMTS specifications

to be prepared and promoted in a manner,

which makes them attractive

to global partners such

that they will be implemented world-wide."

2.2 The composition of UGG

Chair: Karl Heinz Rosenbrock

Vice-Chairs: Phil Davidson, Kirit Lathia

Secretary: Adrian Scrase

Members: Loïc Etesse, Wolf Haas, Dieter Kaiser, Kari Lang,

Tom Lindström, Jean-Marc Salles (all ETSI Board);
Friedhelm Hillebrand, Alan Cox, Gunnar Sandegren,
François Grassot (all from ETSI TC SMG);
Adriana Nugter (GSM A); Thomas Beijer (UMTS F);
Chris Roberts (EC).

In general, there were 10 to 17 delegates present.

2.3   UGG meetings

13 UGG meetings from 13 March until 23 November 1998
Tough and passionate discussions!
Within UGG
Within the ETSI Board
Within the ETSI GA

Results:
° 3GPP Description;
° 3GPP Agreement, and
° 3GPP Working Procedures

20 years GSM, Cyprus, Karl Heinz Rosenbrock

2.4 An Extra-ordinary ETSI GA (29.09.1998)

**The GA had to decide on the scope
and on the structure of the EPP.**

Four votes needed:
**° 92,62% in favour of the principle
of the creation of a 3GPP!**
**° 95,9% in favour that 3GPP includes UTRA
(W-CDMA in FDD mode and TD-CDMA in TDD mode)!**
**° The proposal that 3GPP includes
GSM core network evolution towards 3G
did not each the 71% in the vote (only 63,4%)
and thus failed.**

Therefore, a fourth vote was needed
on a proposal elaborated by an ad hoc group
chaired by Friedhelm Hillebrand!

94,5% of the votes in favour of the following approach:

1. **ETSI to initiate an EPP known as 3GPP**

   ° **3GPP a partnership between ETSI and recognized SDOs and other partners; industrial entities are members of 3GPP and provide the technical input**
   ° **3GPP will develop specifications for the initial phase of a complete 3G mobile system based on UTRAN and evolved GSM core network (G-UMTS)**

2. To initiate the setting up of an EP for UMTS
   to collect current and future ETSI UMTS
   activities outside those G-UMTS areas

3. GSM standardization to continue in ETSI TC SMG
   No duplication of work between
   3GPP and ETSI EP UMTS, new SMG

3 Negotiations with Partners

o **ETSI TC SMG delegation in February 1998 in Japan**

o **GSC/RAST meeting on 30.03/01.04 1998 at Sophia Antipolis**

o **Five meetings with ARIB and TCC (April to December)**

o **Six meetings with T1, ANSI, and T1P1 (June to December)**

o **Two meetings with TTA and RITT (CATR) (October to December)**

4 What is 3GPP 1 (2)

**Standards organizations and other related bodies
have agreed to co-operate for the production of
a complete set of globally applicable Technical Specifications
for a 3rd Generation Mobile System
based on the evolved GSM™ core networks
and the radio access technologies supported by 3GPP
partners (i.e. UTRA both FDD and TDD modes).**

4   What is 3GPP 2 (2)

The Project is entitled the
"Third Generation Partnership Project"
and may be known by the acronym "3GPP™".

3GPP has been established
for the preparation and maintenance
of the above mentioned Technical Specifications;
and is not a legal entity.

Characteristics of 3GPP 1 (2)

❑ **3GPP is characterized by the following attributes:**

➢ **Minimum production time for Technical Specifications from conception to approval;**

➢ **Fast, electronic based approval process;**

➢ **Maximum use of modern (electronic) working methods;**

➢ **Minimum number of hierarchical levels with decision making taking place at the lowest appropriate levels.**

Characteristics of 3GPP 2 (2)

➢ **A Project Co-ordination function and a Technical Specification function;**

➢ **Task oriented, ensuring that on completion of the tasks the future of the project is re-evaluated;**

➢ **Cost effective use of financial/human resources provided by Partner Organizations (if required).**

Partnership and Membership

3GPP is composed of:

- **Partners:**

  – **Organizational Partners**

     **3GPP is open to all
     officially-recognized standards organizations
     irrespective of the geographical location**

  – **Market Representation Partners, and**

- **Individual Members**

Organizational Partners

An Organizational Partner is:

An open standards organization with a national, regional or other officially recognized status (in their country or region)

that:

- **has the capability and authority to define, publish and set standards nationally or regionally and**

- **has signed (or whose sponsor has signed) the Partnership Project Agreement**

Organizational Partners meet as appropriate and make decisions by consensus.

Organizational Partners

Market Representation Partners

Standardization should meet market needs.
Therefore, in order to identify market requirements,
Market Representation Partners
are encouraged to bring their competence to 3GPP.

A Market Representation Partner is an organization invited
to participate by the Organizational Partners
to offer market advice and to bring a consensus view
of market requirements (e.g. services, features and functionality)
falling within the 3GPP scope

A Market Representation Partner:

- does not have the capability and authority to define, publish or set standards nationally or regionally;

- has signed (or whose sponsor has signed) the Partnership Project Agreement;

- has committed itself to the 3GPP scope.

Market Representation Partners

Individual Members

**Membership in an Organizational Partner
is a pre-requisite for Individual Membership in 3GPP;**

Individual Membership is open to legal entities committed to support 3GPP and to:

- **contribute technically or otherwise to one or more of the Technical Specification Groups within the 3GPP scope;**

- **use the 3GPP results to the extent feasible.**

Documentation for 3GPP

The following 3 documents describe 3GPP:

- ❑ **The Partnership Project Agreement**
- ❑ **The original Partnership Project Description (4 Dec 1998)**
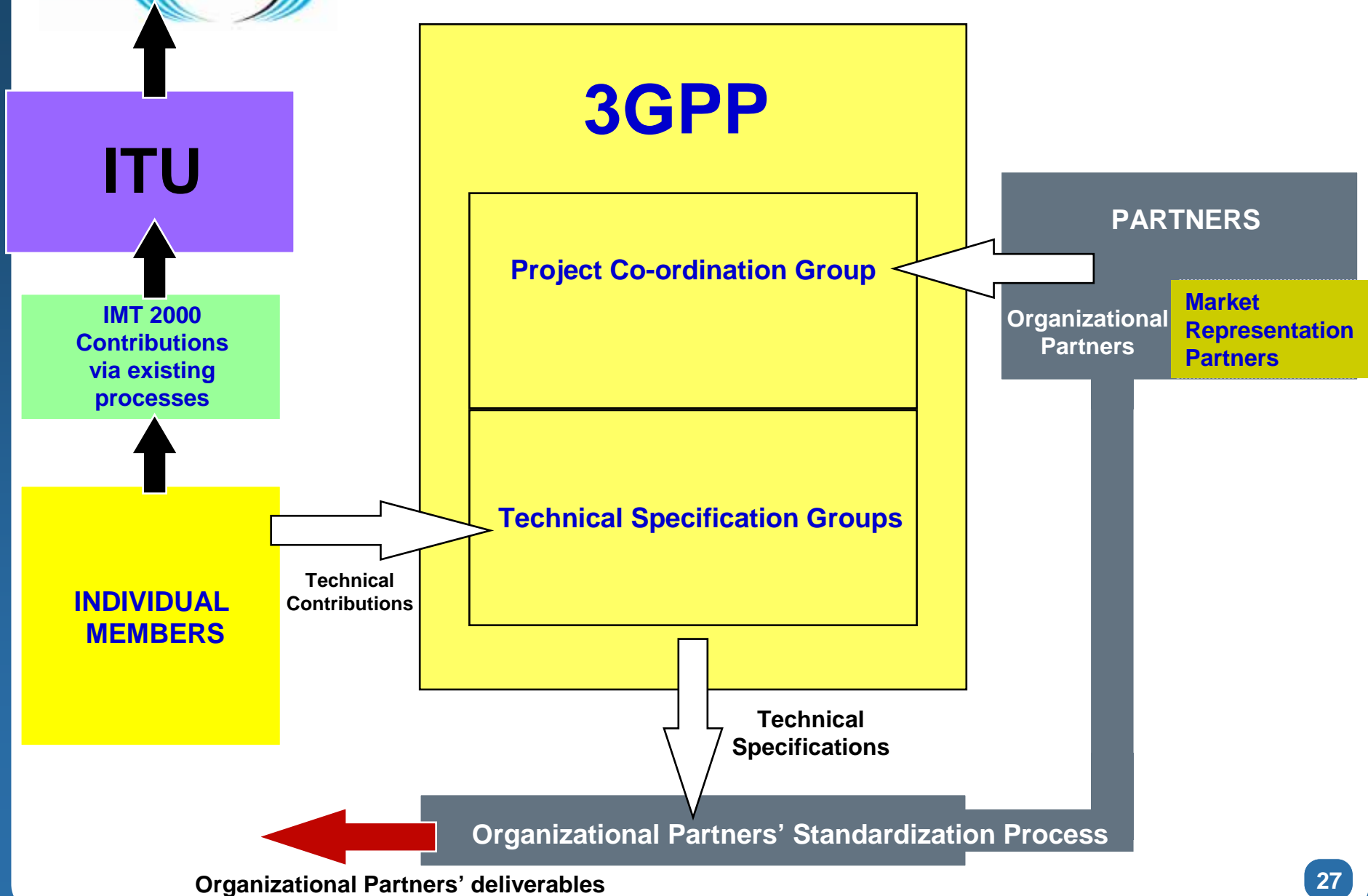- ❑ **The Partnership Project Working Procedures**

Ownership of the Partnership Project results

The Organizational Partners of 3GPP
have joint ownership (including copyright)
of the Technical Specifications and Technical Reports

3GPP does not contribute directly to the ITU.
Formal contributions to ITU Study Groups are
made by ITU members following
existing national/regional processes.

Contributions to ITU

World Class Standards

ETSI

International Recommendations

ITU

3GPP

Project Co-ordination Group

Technical Specification Groups

IMT 2000 Contributions via existing processes

INDIVIDUAL MEMBERS

Technical Contributions

PARTNERS

Organizational Partners

Market Representation Partners

Technical Specifications

Organizational Partners' Standardization Process

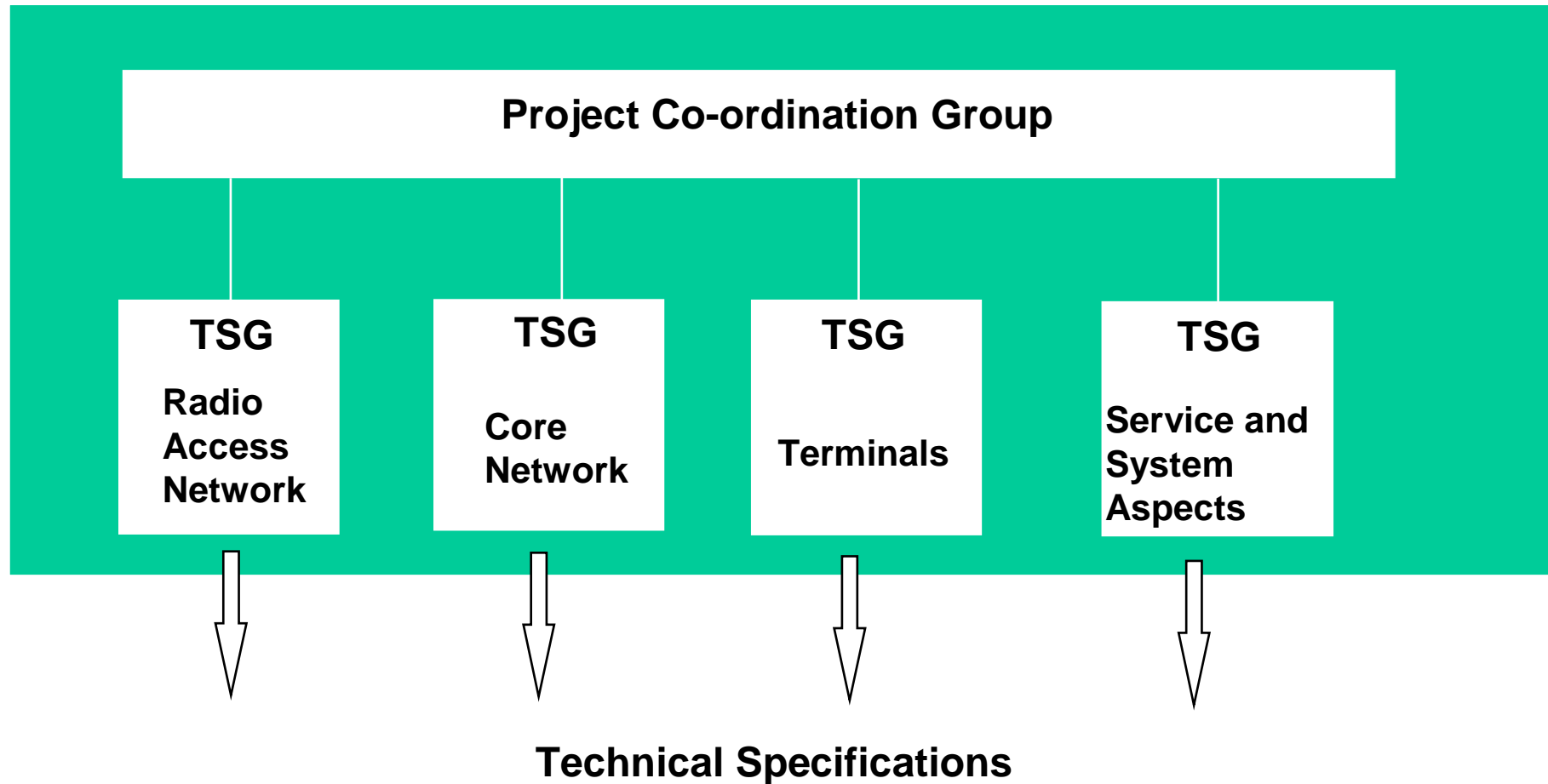Organizational Partners' deliverables

27
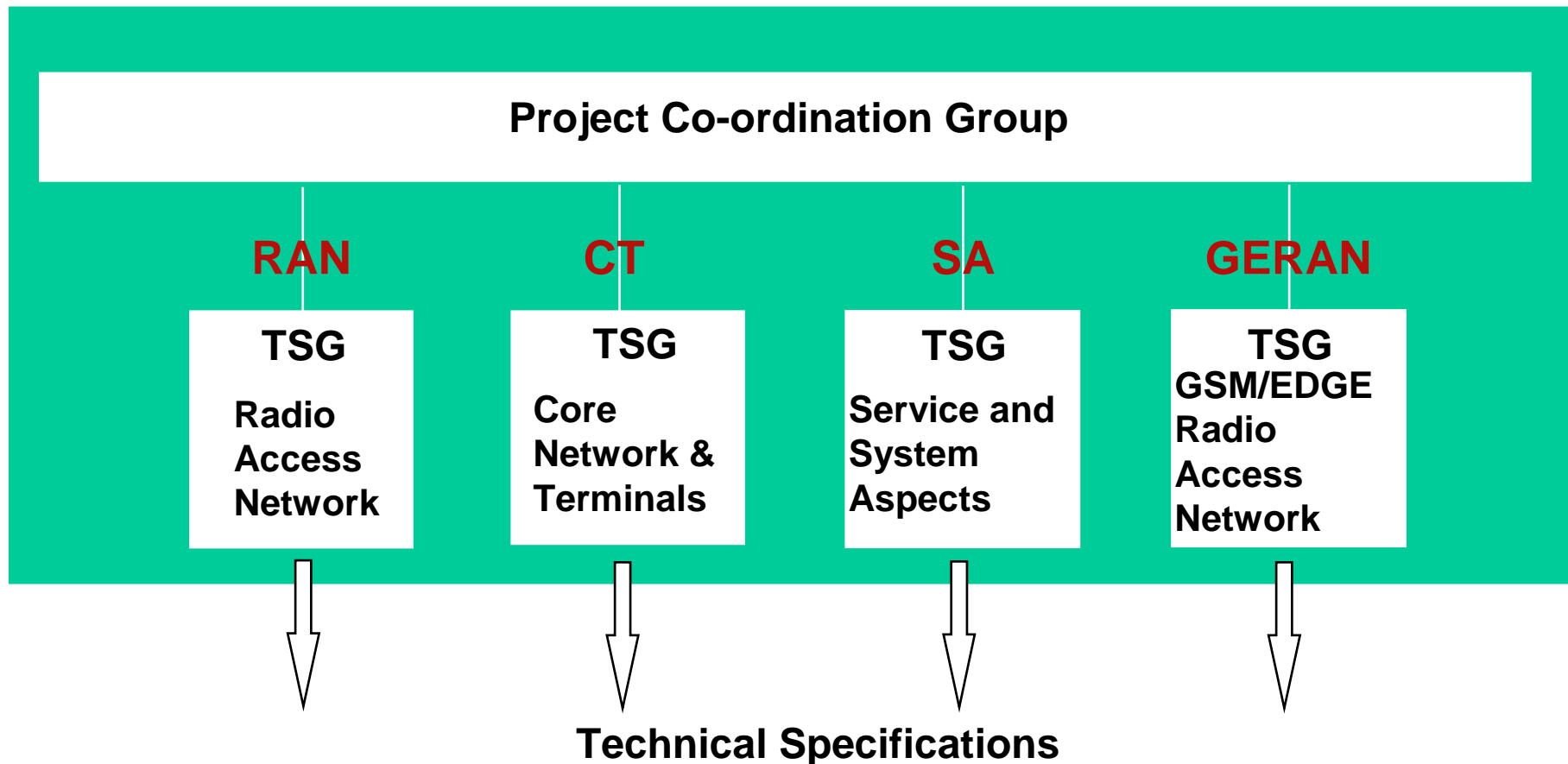
Internal structure of 3GPP

**3GPP consists of a
Project Co-ordination Group (PCG)
and Technical Specification Groups (TSGs)**

**To assist in the co-ordination
of the technical activities,
the TSGs are encouraged to meet
at the same time and place,
as and when appropriate (e.g. four times per year)**

3GPP New Internal Structure

Project Co-ordination Group

RAN	**CT**	**SA**	**GERAN**
TSG Radio Access Network	**TSG** Core Network & Terminals	**TSG** Service and System Aspects	**TSG** GSM/EDGE Radio Access Network

Technical Specifications

What does 3GPP do?

❑ **3GPP prepares and maintains specifications for the following technologies:**

BT

NTT DoCoMo

i.e. all of the technologies on the GSM evolution path

➢ **GSM**

➢ **GPRS**

➢ **EDGE**

➢ **W-CDMA – FDD (Frequency Division Duplex)**

➢ **TD-CDMA – TDD (Time Division Duplex)**
   – in High Chip Rate and Low Chip Rate (TD-SCDMA) modes

A single home for all these technologies
helps to ensure global interoperability

The Mobile Competence Centre

3GPP has a Mobile Competence Centre (MCC) providing comprehensive project support

MCC:

- ❑ **is located at the ETSI HQ in Sophia Antipolis, France**
- ❑ **has 24 full time personnel**
- ❑ **is an international team from 14 nations**
- ❑ **is ISO 9001:2000 compliant**

ITU referencing of 3GPP results

❑ **3GPP does not contribute directly to the ITU**

❑ **Formal contributions to ITU Study Groups
are made by ITU members
using existing national/regional processes**

❑ **ITU – R
Regular updates are submitted to ITU-R Rec. M.1457**

❑ **ITU – T
Collaboration with ITU-T Special Study Group
on "IMT-2000 and beyond"
Regular updates are submitted to ITU-T Rec. Q.1741**

5 THE 3GPP ACHIEVEMENTS

Release '99

❑ **Release '99 - December 1999**

❑ **Main features:**

➢ **Creation of the Universal Terrestrial Radio Access (UTRA) both in FDD and TDD (3.84 Mcps) modes**

➢ **Narrowband AMR (new codec)**

Release 4

❑ **Release 4 – March 2001**

❑ **Main features:**
  – **Bearer independent Circuit Switched network architecture**
  – **Low Chip Rate TDD (1.28 Mcps)**
  – **Streaming**
  – **New Messaging Systems**
    • **Enhanced messaging**
    • **Multimedia messaging**
  – **GERAN concept established**

Siemens press picture

Release 5

- ❑ **Main features:**
  - ➢ **IMS - IP-based Multimedia Services**
  - ➢ **HSDPA - High Speed Downlink Packet Access**
  - ➢ **And much more!**
    - ➢ **Wideband AMR codec**
    - ➢ **End-to-end QoS**
    - ➢ **Intra domain connection of RAN nodes to multiple CN nodes**
    - ➢ **Enhancements to messaging, security, etc…**

Microsoft

What does IMS provide?

❑ **IMS provides:**

➢ **IP Transport in the Core network**

➢ **IP Transport in the UTRAN**

❑ **And provides the possibility for:**

➢ **End to end IP services**

➢ **Increased potential for service integration**

➢ **Easy adoption and integration
   of instant messaging, presence
   and real time conversational services**

What does HSDPA provide?

HSDPA - High Speed Downlink Packet Access -

❏ **Supports services requiring instantaneous high data rates in the downlink**
   ➢ **e.g. Internet browsing; video on demand**

❏ **May be deployed in both Frequency Division Duplex (FDD)
and Time Division Duplex (TDD) modes
(both high and low chip rates)**

❏ **Various configurations defined,
offering data rates of up to 10Mbit/s**

World Class Standards

Release 6

❑ **Main features:**

➢ **IMS Phase 2, including…**

- **Interworking IMS-CS networks;**
- **Group management**
- **IMS Charging**
- **Lawful interception**

➢ **MBMS**

➢ **Enablers for services like PoC (with OMA) including presence capabilities**

➢ **WLAN interworking scenarios 1 – 3**

➢ **Push services**

➢ **Speech recognition and speech enabled services**

➢ **Digital Rights Management (with OMA)**

➢ **Improved LCS capabilities**

➢ **Etc.**

Release 7

❑ **Currently planned features:**
  ➢ **MIMO**
  ➢ **7.68 Mcps TDD**
  ➢ **3.84 Mcps TDD Enhanced Uplink**
  ➢ **Advanced Global Navigation System**
  ➢ **New spectrum, RAN improvements**
  ➢ **Various enhancements**
    • **IMS security, fixed broadband access to IMS,**
    • **LCS, video and voice services**
  ➢ **System enhancements for fixed broadband access to IMS phase 2**
  ➢ **Enhancements for VGCS applications**
  ➢ **Enhanced USIM phonebook**
  ➢ **Personal network management (PNM)**

Release 7 - Results

❑ **40 features/independent WIs completed**

❑ **32 items are 60% or more complete**

❑ **14 items have not yet reached 60%,
but hoped to be completed by 3/007**

Release 8
freezing date will be decided in 03/2007

- ❑ **LTE specifications**
- ❑ **System Architecture Evolution (SAE**
- ❑ **UE Power comsumption reduction (Study)**
- ❑ **Multimedia Priority Service**
- ❑ **eCall data transfer**
- ❑ **Enhanced videotelephony supplementary service**
- ❑ **Local charging zone**
- ❑ **Protection against spam and malware**
- ❑ **Public Warning System**
- ❑ **Value added services for SMS**