

**Technical Specification Group Services and System Aspects  
Meeting #2, Fort Lauderdale, 2-4 March 1999**

**TSGS#2(99)006**

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**Source: SA Secretary (Maurice Pope)**  
**Title: Draft Report of the joint TSG sessions, Sophia Antipolis**  
**Document for: Information**  
**Agenda Item: 4**

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## **1 Opening of the Inaugurate meeting of the 3<sup>rd</sup> Generation Partnership Project**

The Chairman, Mr. Karl-Heinz Rosenbrock, ETSI Director General, opened the meeting, welcoming the 325 delegates from 19 Countries including Japan, Korea and the United States of America. The Chairman introduced the Heads of delegation of the Partner Organizations and the Technical Specification Group Convenors.

The Chairman reported that the 5 Partners signed an agreement for the creation of the 3GPP. This is a milestone in the creation of the 3<sup>rd</sup> generation mobile system development of the IMT-2000.

The agenda was approved.

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## **2 Welcome address by the Organizational Partners**

### **2.1 T1**

Mr. J Lord, head of delegation welcomed delegates on behalf of T1 and looked forward to productive work on the 3<sup>rd</sup> Generation project.

### **2.2 TTC**

Mr. Yamamoto welcomed delegates on behalf of the TTC. In Japan, the number of mobile subs have been increasing fast in the last few years. In order to keep up - need urgently to introduce 3<sup>rd</sup> generation Internet, data, etc. Global roaming, PCS most lightweight terminal, but limited in geographical area (Japan) - now will be able to roam anywhere in the world. He congratulated the 3GPP agreement reached by the Partners. TTC is prepared to provide maximum support and are very happy to work with their Partners.

### **2.3 ARIB**

Mr. Sasaki welcomed delegates on behalf of ARIB, explaining that the 3GPP innovation was a step forward towards the IMT-2000 ambitions of global network collaboration. 3GPP gives a good opportunity to establish global standards and ARIB will fully co-operate to reach the goals of the 3GPP.

### **2.4 TTA**

Mr. Lee said that following the agreement reached in Copenhagen, TTA were pleased to be a Partner of the Project and looked forward to successful co-operation results from the 3GPP.

Korea has launched innovative networks and look forward to contributing their CDMA experience in the 3GPP. He wished the project all speed in the harmonisation of the standardisation work.

## 2.5 ETSI

Mr. Rosenbrock welcomed the creation of the Project. ETSI and the ETSI General Assembly have agreed that activities from SMG related to the 3<sup>rd</sup> generation work will be brought into the Project, while ETSI SMG will continue to exist for 2<sup>nd</sup> generation work. The 3GPP is expected to produce global standards in time for the market requirements.

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## 3 Results of the ARIB/ETSI/T1/TTC/TTA meeting, 2<sup>nd</sup> - 4<sup>th</sup> December, Copenhagen

TD Gx98-040 was introduced which gives the 3<sup>rd</sup> generation project agreement. The agreement was signed on 4<sup>th</sup> December by the 5 Partners. The UMTS Forum are also invited to sign. A statement with the representation of the GSM MoU has been made, which is the desire to reach an acceptable agreement. This document was noted.

TD Gx98-041 - Project Co-ordination group Terms of Reference. Each Organisation Partner and Market representation Partner can send 3 representatives, and the PCG will be made up of these representatives and the TSG Chairmen. The responsibilities of the PCG are also given in TD Gx98-041.

Mr. Toepfer (Mannesmann Mobilfunk, GSM MoU representative) reported that they had objections to the responsibilities, in the "fairness" of the different Members in such things as the voting rights and weights (the current rules allow one member company one vote, irrespective of their company size).

It was stated that the PCG is not really equipped to deal with technical issues, and questioned how they can co-ordinate this and resolve disputes. It was explained that the detailed Technical issues were the responsibility of the TSGs, and the PCG would resolve disputes on the more Political level. Mr. Sandergren (Ericsson) pointed out it is possible for the PCG to resolve Technical issues by calling a joint plenary of the TSGs to solve problems beyond their expertise.

Mr. Jones (Omnipoint, US) asked what steps will be taken to address the concerns of the GSM MoU and in what time-frame. Agreement is aimed by 24 February. This will be addressed by the ETSI Board this week and the Partners will address this together at the next meeting (which has not been scheduled yet).

Mr. Toepfer (Mannesman Mobilfunk, GSM MoU representative) responded that this should be addressed by the Partners rather than the ETSI Board and requested that this meeting be scheduled and the item placed on the agenda. It was explained that the ETSI Board would formulate the ETSI Position, which would be discussed with the other Partners at their meeting, where the Partners' positions would also be taken into account.

Dr. Neumann (Siemens) asked who could join the PCG. This will be decided by the Partners and has not yet been fully decided.

Mr. Thomas (France Telecom) asked for clarification on who will be part of the PCG, and for a general indication of the current thinking for this. The Chairman responded that the PCG will probably meet in conjunction with TSG meetings, the next meeting is expected around February 1999. When the TSG Chairmen and Vice-Chairmen have been determined, the full make-up of the PCG will be known. Currently, the PCG is expected to consist of 3 representatives from each Partner organisation, 3 from the UMTS Forum and 3 from the GSM MoU.

The Chairman then presented the Partnership Project Description.

"One member, one vote" was questioned as a principle, as it did not seem fair to the different weightings of different individual members. Also the level of vote for agreement should be lower than 71%, and a level of 50% was suggested. The Chairman replied that the consensus process was designed to prevent blocking from a few members, of work to the interest of the larger majority. The process will be reviewed after 6 months, and all comments of this type will be taken into account.

TTA reported that the process seemed to be reasonable, and that many standardization bodies getting together in a globalisation process will exasperate the problem of reaching agreement already experienced in regional bodies.

It was stated that the main objective is to make a single set of system specifications wherever possible, but that regional variations would be necessary in some cases (e.g. regulatory requirements).

Mr. Thomas (France Telecom) asked what representation ETSI would have in the PCG. It was clarified that ETSI would have equal power as the other 4 Partners (1 of 5 votes).

The question of voting weights between organisations was raised. The Partners have different rules in their organisations and it was difficult to align them, so a pragmatic approach of 1 member 1 vote was chosen, to be reviewed after 6 months.

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## 4 Creation of the Technical Specification Groups

TD Gx98-0007 - Mr. Grassot (Nortel) presented the TSG Terms of References. Each TSG was invited to discuss and review their Terms of Reference and report back to the closing Joint session. It was highlighted that the System Aspects (SA) TSG has a responsibility for the overall co-ordination of the technical issues between the TSGs.

Dr. Neumann (Siemens) asked about the links between Core Network and Terminals TSGs, and wondered if this meant that companies had to send their delegates to all TSGs instead of a single group. It is left to the TSGs to organise their work in a work-objective way in order to overcome these problems.

Mr. Wiener (One-2-One) asked if "liaison" refers to groups of the 3GPP or Partners, or groups world-wide, such as the ITU. It was pointed out that liaison is intended between the TSGs automatically. External relations should be made via the PCG in order to set up agreements as necessary.

Dr. Neumann (Siemens) asked about the SA TSG being responsible for co-ordination. The other groups are responsible for their technical work, and SA has the additional responsibility of the final approval and maintenance of work packages (i.e. the Project co-ordination role). Siemens would like to see a Technical co-ordination group, this should be discussed during the SA TSG meetings. Joint meetings are a tool which may be considered for co-ordination matters.

Mr. Crisp (Marconi communications) asked about the FDD/TDD aspects, as they are not mentioned in the RAN Terms of Reference. It was explained that this document is under the main 3GPP description document, and therefore the FDD/TDD is included. The Terms of References should be reviewed by the individual TSGs in order to answer the open issues (TD Gx98-007).

Mr. Jarvis (Lucent UK) asked if the ITU has been approached for use of their buildings in Geneva. This has not been done yet, but no options will be ruled out for future meeting venues.

Mr. Thomas (France Telecom) stated that, to him, it seemed that the Scope of the SMG UMTS work had been split among the TSGs, and that joint meetings should be considered. This should be discussed in the TSGs and any necessary joint meetings should be proposed.

Mr. Toepfer (Mannesman Mobilfunk) asked if joint TSG meetings could be set up, where the meetings may occur on different days at the same place, in order to maximise the available experts. Mr. Andersen (Tele Danmark) said that the TSGs will probably need too much time to allow serial meetings. The TSGs should discuss their meeting requirements and arrange the co-ordination methods to be used. The TSGs will fix their next meetings in their individual sessions. Organisational matters should also be discussed in order to suit the practicalities and needs of each group.

The test specifications in TSG Terminals was questioned, as the RAN group may be better to hold all of the Radio related work. It was explained that the TSGs would develop their Terms of References based upon these proposals.

Mr. Gilchrist (Motorola) said that the TSGs CN and RAN appear to have joint responsibility on the Iu interface, and this could lead to problems. It was explained that the drafting group thought the Iu interface should be under the control of the RAN TSG, but this should be discussed within the TSGs.

### 4.1 Announcement of Technical Specification Groups Convenors

The Convenors for the TSGs were appointed at the Partners meeting in Copenhagen. Convenors were appointed as follows:

TSG Core Network - Mr. Stephen Hayes, Ericsson (T1).

TSG RAN - Mr. Akio Sasaki, NTT DoCoMo (ARIB).

TSG SA -Mr. Fred Harrison, BT (ETSI).

TSG T - Dr. Sang-Keun Park, Samsung (TTA).

## 4.2 Procedures for the Election of TSG Chairmen and Vice Chairmen

The rules for the election of Chairmen and Vice Chairmen were presented.

Point (vi) was questioned, because if the PCG rejects the elected candidate from a TSG, then they may need to run the election again.

Mr. Gilchrist (Motorola) took a strong exception to point (vi), as this seems to make the election procedure redundant. It was explained that the PCG would respect the vote unless the results were unacceptably unbalanced on Geographical and company balance. It was clarified that the PCG intend to prevent unacceptable imbalance, rather than ensure complete balance within the Chairmanships, so it was not expected that the elected candidates would be refused in normal circumstances.

It was suggested that the TSG should have rules which prevent Vice Chairmen being from the same partner or country as the elected Chairman. This would prevent rejection at the PCG level of chosen candidates.

Much discussion took place, and it was finally decided to discuss this matter with TD Gx98-006, which gives the rules of Procedures, including the election requirements.

Mr. Holley (BT) considered point (iii) and suggested that candidatures should not be accepted at any time up to the vote, but say 1 week before the meeting so that everybody could consider the candidatures.

Siemens said that insisting on pre-candidature would mean that candidates cannot be chosen during meetings in case of unforeseen problems with candidatures.

Mr. Sandegren (Ericsson) suggested a pragmatic approach, that candidates should apply at least 1 week before the meeting, and that applicants should indicate whether they would accept Vice-Chairmanship in case of not being elected as Chairman. Late applications should be allowed in exceptional circumstances.

**It was agreed to take the suggestion of Mr. Sandegren.**

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# 5 Presentation of the Partner Organisation 3<sup>rd</sup> Generation Mobile Systems Work Programs

## 5.1 ARIB

Mr. Sasaki made a presentation, as given in TD Gx98-052.

The document is for information to the joint session, but the timing issues are for discussion within the relevant TSGs. USIM (due for completion 04/99) is not currently a mandatory feature in IMT2000, but may become pseudo mandatory depending on the definition of the UIM in 3GPP. The ARIB work corresponds to the SMG9 work on SIMs, and this work will be followed as far as possible for compatibility with GSM interfaces. It was also clarified that the USIM is optional in ARIB work.

ARIB were asked if the completion of their Layer 1 and Layer 2 specifications were on target for 12/98, as well as other documents for the ambitious time scales presented. ARIB said that they expect the completion in time. 3GPP will need to check the technical compatibility, but there did not seem to be a problem so far. There are, however, some terminology differences, which makes direct comparison of the SMG work and ARIB work difficult. Because of this, some milestones may need to be revised to ensure they are fully understood. TSG RAN will discuss this and report back to the closing joint session.

## 5.2 ETSI

Mr. Hillebrand (ETSI TC SMG Chairman) gave a presentation on the ETSI SMG work plan, as given in TD Gx98-056.

### 5.2.1 SMG1

SMG 1 Chairman, Mr. Cox, presented TD Gx98-017 (with a view-foil summary)

### 5.2.2 SMG2

SMG 2 Chairman, Mr. N.P.S. Andersen, presented TD Gx98-049

It was suggested that the hand-over meeting of SMG2 UMTS work be a joint SMG2 TSG RAN meeting to assist in the hand-over. This will be discussed in TSG RAN.

It was clarified that SMG2 would continue to work on 2<sup>nd</sup> generation work. For efficiency, all the work on 3<sup>rd</sup> generation radio should be done in a single body (RAN).

### 5.2.3 SMG3

SMG 3 Chairman, Mr. Dettner, presented TD Gx98-026.

### 5.2.4 SMG4

SMG 4 Chairman, Mr. Holley, presented TD Gx98-029.

### 5.2.5 SMG6

SMG 6 Project co-ordinator, Mr. Sanders, presented TD Gx98-015 on behalf of Dr. Hertel (SMG6 Chairman).

### 5.2.6 SMG7

SMG 7 Chairman, Mr. Thomas, presented TD Gx98-058.

### 5.2.7 SMG8

SMG 8 Chairman, Mr. Pike, presented verbally that there were no plans to transfer SMG8 work to 3GPP, as the work was GSM specific.

### 5.2.8 SMG9

SMG 9 Chairman, Dr. Vedder, presented TD Gx98-024.

SMG9 basic UMTS document and general mechanical interface work will go into the UMTS area. Some API work may also be applicable. TD Gx98-063 gives more SIM information.

### 5.2.9 SMG10

SMG 10 Chairman, Prof. Walker, presented TD Gx98-012.

### 5.2.10 SMG11

SMG 11 Vice Chairman, Mr. Usai, presented TD Gx98-032.

### 5.2.11 SMG12

SMG 12 Chairman, Mr. Courau, presented TD Gx98-018.

It was recognised that SMG12 may move all of its work into the 3GPP in a combination of transfer and sub-contracting arrangements in order to ensure non-divergence of the evolution of the GSM Core Network towards UMTS.

### 5.2.12 Working Methods

The SMG WOME Chairman, Mr. Donat, presented TD Gx98-045 and TD Gx98-061 on SMG WOME.

WOME offer their experience and services to the 3GPP to develop working methods for the specification making and request the decision for the creation of a 3GPP Permanent Nucleus. This should be discussed in the TSGs and recommendations made to the closing joint session.

### 5.2.13: SMG Co-ordination group

Mr. Thomas presented TD Gx98-009 which contains inputs from the SMG Co-ordination group for the TSGs and will be discussed in detail in the relevant TSGs.

### 5.2.14: SMG UMTS baseline documents

Mr. Samukic introduced the contents of TD Gx98-021 and TD Gx98-031 for information.

## 5.3 T1

Ms. Melvin presented the T1 background and proposed input to the 3GPP. T1 wishes to speed the merging of the global standardization on 3<sup>rd</sup> generation mobile for the benefit of all involved.

## 5.4 TTA

Mr. Lee presented TD Gx98-064 on TTA Objectives for 3GPP.

## 5.5 TTC

Mr. Takabatake presented the TTC work in Japan (TD Gx98-059). Again the time scales are for 04/99 presentation of specifications, and this needs further discussion in the TSGs in order to check the realism of these targets in line with SMG Core Network evolution work to be done.

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## 6 Introduction of 3GPP Working Procedures

A presentation was given which provided an overview of TD Gx98-006. The final agreements were made on 4 December, so some items in TD Gx98-006 may need updating for recently agreed modifications. The presentation slides were an up-to-date summary of the agreed procedures.

The issue of proxy voting versus company representation at meetings was explained, which are given in TD Gx98-006.

The absence of text on the dismissal of the PCG officials was questioned, as text exists for the dismissal of TSG officials. It was clarified that this had not been an issue in the Working Procedures meetings.

Work Item adoption by the PCG was questioned, but it was explained that this function would only be for a co-ordination and to check that work falls within the agreed Terms of reference of the TSG raising the work items. In order not to add any delay in the PCG adoption process, work can continue on the proposed item in the TSG until adoption by the PCG, and any issues would be signalled at this time.

It was asked that for TSG Membership listings, could single delegates register for more than 1 TSG. This should be possible for the case of co-located/parallel meetings of TSGs (irrespective of the actual attendance to all groups during the meeting).

Electronic working methods were not visible in the Procedures, it was explained that the electronic working aids would be the subject of a presentation under agenda item 7.

A proposal was made not to approve the Working Procedures here, but to give time for delegates to come back with comments in the future. The Chairman preferred that we approve what is available and review after the 6 month trial period. There will in any case be representation in PCG by the TSG Chairmen and Vice Chairmen before decisions are made by the PCG Partner members.

It was clarified that "Regions" in the 3GPP context refer to Asia, Europe and North America.

A question about access to information (e.g. 3GPP Web site) for people dropped from the membership list was raised. It was clarified that the principle was to leave access open to the information, even to members who do not appear on the membership lists of individual TSGs.

The time plan for the 3GPP was questioned. The Chairman replied that the implementation was expected by 2001, but the actual end date of the Project could not be defined exactly at this stage, as additional Phases may be implemented, depending on the success of the Project and the future market requirements.

It was requested by Telecom Italia Mobile that the Voting mechanism (rights/weighting) be modified to be more fair (ref: Article 28).

Article 22 should be corrected where it mentions "Organization", where it should be "Member company" (3<sup>rd</sup> paragraph).

Mr. Andersen (Tele Danmark), asked if changes to the Working Procedures need to be approved by ETSI GA (and the equivalent for the other Partners organisations) before proposing changes to the PCG. It was explained that this may not be necessary, but would be examined on a case by case basis, depending on the changes proposed.

It was clarified that an individual can only represent one member company at an individual TSG meeting. Proxies can only be carried for eligible member companies. The use of a proxy vote does not count as attendance to a meeting for remaining on the membership list of the TSG.

Article 28 gives a clear description of the election procedures. Article 14 gives the possibility for the PCG to ask for a re-election in exceptional circumstances.

Article 3 was questioned, as it mentions the "first phase" of Core network, so is there a second Phase, and if so, what is it?

The Chairman explained that this had not been defined, as it depends upon the results of the work on the "first Phase". Mr Cox added that the other work ongoing in the UMTS area will also help to define the future 3<sup>rd</sup> Generation work.

It was clarified the paragraphs 3 and 4 of Article 35 should be deleted (they were replaced by the first 2 paragraphs and should have been deleted during the editing of the document).

Mr. Sandegren (Ericsson) stated that the document should be read in a flexible manner to make the working of the TSGs smoother, rather than reading the letter of the rules, as they have not been finalised in a fully consistent manner. This was agreed and the discussion on the document was ended in order to go on to other items.

**Concerns with the Procedures should be forwarded from the TSGs to the PCG for future update. Delegates to the TSGs are expected to contribute to these comments for improvement.**

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## 7 Organisation of TSGs FTP servers and WWW site

Mr. McAuley (ETSI Secretariat FAS Department) presented details of the 3GPP server site and Web site.

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## 8 TSG Working Practices

TD Gx98-008, TD Gx98-0022, TD Gx98-0023, TD Gx98-0039, TD Gx98-0045 and TD Gx98-0046 were not discussed in the joint session. The TSGs should check these documents and act as appropriate, reporting back to the closing joint session.

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## 9 Any Other 3GPP Inaugural session Business

None.

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## 10 Adjournment of the common Inaugural session

The session was adjourned and TSGs asked to start at 08.30 the next morning. The final session will commence at 15.15.

The individual TSGs then met and discussed agenda items 11 to 19, reporting back to the closing joint session.

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## 15 Reports from the TSG individual sessions

### 15.1 TSG Terminals

The Convenor presented the results of the Terminals TSG meeting, as given in TD Gx98-072.

Some modifications to the Terms of Reference were agreed.

Working groups were agreed as follows:

- Mobile Terminal Conformance Testing, Convened by Mr. Remi Thomas (France Telecom).
- Mobile Terminal Services & Capabilities, Convened by Mr. Kevin Holley (BT).
- USIM, Convened by Dr. Klaus Vedder (Gieseke & Devrient)

A meeting schedule for the TSG and its working groups was developed and is included in TD Gx98-072.

### 15.2 TSG RAN

The Convenor presented the results of the RAN TSG meeting.

Election of TSG Chairmen was discussed and it was concluded to follow procedures in TD Gx98-048.

Some modifications to the Terms of Reference were agreed and were presented to the Joint session. These modifications were discussed and clarifications were provided. The inclusion of handover between GSM and UMTS was proposed, and 3GPP Members asked to consider if this is appropriate for the Terms of Reference. It was decided that the issue is not a ToR subject, but the inclusion of the work in individual TSGs should be considered. The specification of the Iu interface was discussed and some modifications to the text of the Terms of Reference were agreed.

TSG Terminals will be responsible for terminal equipment radio conformance specifications. TSG RAN will be responsible for terminal equipment radio performance specifications.

Working groups were agreed as follows:

WG1, Radio layer 1 specification, Convened by Mr. Furuya (NEC).

WG2, Convened by Mr. Fauconnier (Nortel).



WG3 Iu , Convened by Mr. Willars (Ericsson).

WG4: Radio performance/protocol aspects and Base Station conformance aspects, Convened by Mr. Benn (Motorola).

Ad-hoc group on ITU internal co-ordination (for liaisons, etc.), Convened by Mr. Magnani (CSELT).

Some discussion took place about the scope of WG4. Members are asked to contribute to the RAN and Terminals TSGs on this matter.

A draft meeting schedule was developed. WGs to decide by correspondence.

## 15.3 TSG SA

The Convenor presented the results of the SA TSG meeting.

The following Interim WGs were set-up, which will be revised if necessary at the next TSG meeting.

Services, Convened by Mr. Alan Cox (Vodafone).

Architecture, Convened by Mr. Yukio Hiramatsu (NTT).

Security, Convened by Prof. Michael Walker (Vodafone).

CODEC, Convened by Mr. Kari Jarvinen (Nokia).

Network Management ad-hoc group: Mr. Inaki Cabrera (AirTel Movil) (availability is to be confirmed, Mr. Albert Yuhan (Omnipoint) will be appointed in the case that Mr. Cabrera is unavailable).

A meeting schedule was also produced for the TSG and Interim WGs.

## 15.4 TSG CN

The Convenor presented the results of the CN TSG meeting.

The Terms of Reference were approved with minor changes. The Work Plan for CN was approved with some minor changes.

Working groups were agreed as follows:

WG1: Mobility Management, Call Control, Session Management, Convened by Mr. Hannu Hietalahti (Nokia).

WG2: CAMEL and MAP, Jointly convened by Mr. Masami Yobusaki (DoCoMo) and Mr. Ian Park (Vodafone).

WG3: Interworking with External Networks, Jointly convened by Mr. Oscar Lopez-Torres (Telemobile) and Mr. Norbert Klehn (Siemens).

A meeting schedule was also produced for the TSG and Interim WGs.

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## 16 Close

The Chairman closed the meeting, which had achieved it's goals and thanked the delegates for their co-operation and fine work.

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# Annex A: Revised TSG Terms of Reference

## TERMS OF REFERENCE RADIO ACCESS NETWORK Technical Specification Group

including revisions made at TSG#1, 7-8 December 1999

### Background

Third generation mobile systems should be based on new wide band, multimode, flexible radio access. This approach will ensure that systems based on 3GPP specifications will be capable of rapid development and deployment of competitive service offerings while still enabling global roaming.

### Terms of reference

The technical specification development work within 3GPP is accomplished by Technical Specification Groups (TSGs) according to the principles and rules contained in the Project reference documentation ( Partnership Project Description, Partnership Project Agreement, Partnership Project Working Procedures).

In particular the TSGs report to the Project coordination Group (PCG), and may organize their work in Working Groups and liaise with other groups as appropriate.

Each TSG has the responsibility to develop, approve and maintain the specifications within its terms of reference.

The TSG **Radio Access Network** (TSG-R) is responsible for the radio access part, including its internal structure, of systems based on 3GPP specifications.

Specifically it has a responsibility for:

Terminal Equipment and UTRAN functions (FDD & TDD), requirements and interfaces. Management of work items placed under its responsibility.

More specifically, TSG-R will address the following areas of work:

- Radio Layer 1 specification;
- Radio Layer 2 specification;
- Radio Layer 3 RR specification;
- Iub specification;
- Iur specification;
- Iu specification;
- UTRAN O&M requirements;
- Conformance test specifications for testing of all aspects of base stations;
- Specifications for radio performance and protocol aspects from the system point of view.

### Glossary of terms

CN	Core Network
FDD	Frequency Division Duplex
IP	Internet Protocol
O&M	Operations and Maintenance
QoS	Quality of Service
RR	Radio Resource
TDD	Time Division Duplex
UE	User Equipment
USIM	UMTS Subscriber Interface Module
UTRAN	Universal Terrestrial Radio Access Network
VHE	Virtual Home Environment

**TERMS OF REFERENCE**  
**TERMINALS**  
**Technical Specification Group**

including revisions made at TSG#1, 7-8 December 1999

**Background**

One of the key objectives of third generation systems is that they should aim at providing services anywhere, anytime. This translates into requirements for the 3GPP terminals to roam freely between networks and to be able to circulate freely around the globe.

**Terms of reference**

The technical specification development work within 3GPP is accomplished by Technical Specification Groups (TSGs) according to the principles and rules contained in the Project reference documentation (Partnership Project Description, Partnership Project Agreement, Partnership Project Working Procedures).

In particular the TSGs report to the Project coordination Group (PCG), and may organize their work in Working Groups and liaise with other groups as appropriate.

Each TSG has the responsibility to develop, approve and maintain the specifications within its terms of reference.

The TSG **Terminals** (TSG-T) is responsible for specifying the Terminal Equipment interfaces ensuring that terminals based on the relevant 3GPP specifications meet the 3GPP objectives.

Specifically it has a responsibility for:

- Terminal Equipment performance specifications;
- USIM and its interface specifications;
- Management of the work items placed under its responsibility.

More specifically, TSG-T will address the following areas of work:

- Service capability protocols;
- Messaging;
- Services end-to-end interworking;
- USIM to Mobile Terminal interface and functionality;
- Model/framework for terminal interfaces and service (application) execution;
- Conformance test specifications of terminals, including radio aspects;
- Multi-mode terminals.

**Glossary of terms**

USIM

UMTS Subscriber Identity Module

**TERMS OF REFERENCE**  
**SERVICE AND SYSTEM ASPECTS**  
**Technical Specification Group**

including revisions made at TSG#1, 7-8 December 1999

### **Background**

One key aspect of third generation systems is that they should be based on defined «service capabilities» rather than on defined services. This approach will ensure that systems based on 3GPP specifications will be capable of rapid development and deployment of competitive service offerings while still enabling global roaming via the Virtual Home Environment (VHE) concept.

### **Terms of reference**

The technical specification development work within 3GPP is accomplished by Technical Specification Groups (TSGs) according to the principles and rules contained in the Project reference documentation (Partnership Project Description, Partnership Project Agreement, Partnership Project Working Procedures).

In particular the TSGs report to the Project coordination Group (PCG), and may organize their work in Working Groups and liaise with other groups as appropriate.

Each TSG has the responsibility to develop, approve and maintain the specifications within its terms of reference.

The TSG **Systems Aspects** (TSG-S) is responsible for the overall architecture and service capabilities of systems based on 3GPP specifications and, as such, has a responsibility for cross TSG co-ordination. Any difficulty that may appear in this role shall be reported to the PCG.

Specifically it has a responsibility for:

- Overall system architecture including the assignment of functions to particular subsystems (UTRAN, CN, Terminal Equipment, USIM), key information flows and definition of required bearers and services offered by these different subsystems;
- Development of a framework for services, service capabilities, service architecture, charging and consideration of need for «default» services and/or applications;
- Definition of a security framework and review of security aspects of overall system;
- Management of work items including assignment of tasks to other TSGs and monitoring of progress.

More specifically, TSG-S will address the following areas of work:

- **Services Capabilities:**
  - Definition of service and feature requirements;
  - Development of service capabilities and a service architecture for cellular, fixed and cordless applications.
- **Operational capabilities:**
  - Charging and Accounting;
  - Network Management;
  - Security Aspects.
- **Architecture:**
  - Definition, evolution and maintenance of the overall architecture including the assignment of functions to particular subsystems (e.g. UTRAN, CN, Terminal Equipment, USIM) and key information flows;

- In co-operation with the other TSGs, define required services, service capabilities and bearers capabilities offered by the different subsystems, including Quality of Service requirements for access to both packet and circuit switched networks.
- **CODEC aspects:**
  - Principles for definition of end-to-end transmission;
  - Definition, evolution and maintenance of relevant specifications.
- **Project Co-ordination:**
  - High level co-ordination of the technical work performed in other TSGs and monitoring of progress.

#### **Glossary of terms**

CN	Core Network
IP	Internet Protocol
O&M	Operations and Maintenance
QoS	Quality of Service
RR	Radio Resource
UE	User Equipment
USIM	Universal Subscriber Interface Module
UTRAN	Universal Terrestrial Radio Access Network
VHE	Virtual Home Environment

**TERMS OF REFERENCE  
CORE NETWORK  
Technical Specification Group**

including revisions made at TSG#1, 7-8 December 1999

**Background**

The third generation systems based on 3GPP specifications will rely on evolutions from the GSM network standards. This approach will ensure that systems based on 3GPP specifications will be capable of rapid development and deployment of competitive service offerings while still enabling global roaming.

**Terms of reference**

The technical specification development work within 3GPP is accomplished by Technical Specification Groups (TSGs) according to the principles and rules contained in the Project reference documentation (Partnership Project Description, Partnership Project Agreement, Partnership Project Working Procedures).

In particular the TSGs report to the Project coordination Group (PCG), and may organize their work in Working Groups and liaise with other groups as appropriate.

Each TSG has the responsibility to develop, approve and maintain the specifications within its terms of reference.

The TSG **Core Network** (TSG-CN) is responsible for the specifications of the Core network part of systems based on 3GPP specifications.

Specifically it has a responsibility for:

- User Equipment - Core network layer 3 radio protocols ( Call Control, Session Management, Mobility Management);
- Core Network internal interfaces for Call Associated and Non Call Associated signaling;
- Interconnection of the Core Network with external networks;
- Management of work items placed under its responsibility.

More specifically, TSG-CN will address the following areas of work:

- Mobility management, call connection control and session management signalling between the user equipment and the core network;
- Core network signalling between the core network nodes. The signalling supports functionality such as user information, subscription information and control of network services;
- Interworking with 2<sup>nd</sup> generation networks (e.g. handover to / from GSM);
- Definition of interworking functions between the core network and external networks;
- Packet related matters such as mapping of QoS (e.g. transparency for IP domain applications, general for bearer types, special for optimized applications such as Voice over IP);
- Core network aspects of the Iu interface;
- Core network O&M requirements.

**Glossary of terms**

CN	Core Network
IP	Internet Protocol
O&M	Operations and Maintenance
QoS	Quality of Service
RR	Radio Resource
UE	User Equipment
USIM	UMTS Subscriber Interface Module
UTRAN	Universal Terrestrial Radio Access Network
VHE	Virtual Home Environment

