Technical Specification Group Services and System Aspects **TSGS#5(99)345**

Meeting #5, Kyongju, Korea, 11-13 October 1999

**Source:** **Secretary TSG SA (Maurice Pope)**

**Title:** **Draft Report of TSG SA Meeting #4, Version 1.0.0**

**Document for:** **Approval**

**Agenda Item:** **3**

# Draft Report, Version 1.0.0

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## 1 Opening of the meeting

The TSG SA Chairman, Mr. Niels Peter Skov Andersen, welcomed delegates to the 4th meeting of TSG SA in Miami, Florida, USA. On behalf of the Hosts GSM North American Alliance, Mr. Gary Jones welcomed delegates to the meeting.

The SA Chairman reported that new members (China) have joined the 3GPP as an Organisational Partner and that the GSM Association have joined as a Market Representation Partner.

## 2 Approval of the Agenda

The agenda, contained in **Document SP-99259**, was approved without modification. Some reallocation of the documents to more appropriate agenda items was made. ITU expectations of 3GPP will be dealt with under item 7 (other issues).

## 3 Approval of the meeting report of TSG SA Meeting no. 3

The report, given in **Document SP-99215**, was approved without modification. Future reports will be approved using the same e-mail comment and final approval at plenary approach.

## 4 Letters / Reports from other groups

### 4.1 TSG T, TSG CN, TSG RAN

**Document SP-99217** "Questions ITU-R 39/8 and 77/8". TG 8/1 WG2 Chairman introduced the document, reporting that TG 8/1 are trying to produce a new release of M.1224 and invite 3GPP delegates to provide abbreviations and definitions in the CDMA area.

SA WG1 will study this in order to try to avoid inconsistency within the 3GPP. SA WG1 Chairman asked if there was an equivalent document in ITU-T. It was clarified that the TG 8/1 document is for the IMT-2000 system terms and definitions and covers the whole IMT-2000 system.

It was recalled that at the last TSG SA meeting it was agreed to have a common vocabulary document and to base it on the one developed by TSG RAN. Each group are responsible for the terms and definitions in their area, and TSG SA will be responsible for the overall set. All groups were requested to provide their comments on the existing definitions, and to provide new ones, to the rapporteur of the vocabulary document and to the 3GPP Support Team. The rapporteur and the 3GPP Support Team will flag any conflicting proposals.

### 4.2 Partners and their bodies

**Document SP-99216** Liaison Statement (LS) from ETSI TC NA on an ETSI liaison point for UMTS naming and addressing matters. The liaison was for information and asks for continued liaison on Naming and Addressing matters. The Liaison was noted by TSG SA as being in line with the existing work. It was agreed to also forward the liaison statement to TSG CN for consideration.

**Document SP-99221** LS from T1P1 – comments on the requirement for Active Location Retrieval in CAMEL Phase 3. The liaison was for information on the current CAMEL work ongoing in TSG CN and TSG SA.

**Document SP-99222** LS from ETSI SMG2 to TSG SA responding to a Liaison on the use of GSM SIM cards for 3G Access. SMG2 advise that, if the 3G Operator is to have the possibility to reject the request for service from a user with a GSM-only SIM using the 3G Air interface, the simplest solution will be to let a dual-mode mobile station revert to single-mode GSM operation as long as it is registered on that PLMN, this reversion could, e.g. be based on information provided at the registration update. The Liaison was noted with the recognition that from the GSM radio side the compromise is fairly simple.

**Document SP-99223** LS from SMG2 concerning EDGE Phase II. It was noted that there is an ad-hoc meeting set up at the next SA WG1/SMG1 meeting to discuss this topic. It was noted that especially for dual-mode operation, there would be a clear advantage of having a co-ordination of the QoS requirements and bearer definitions between 3G and the future developments of GSM/EDGE.

**Document SP-99285** Presentation from the GSM Association. Mr J. Twingler presented the status report from the GSM Association. The GSM Association is working on many things, including the 2G-3G roaming issue. The GSM Association fully supported the compromise solution proposed by TSG SA. This is reported in **Document SP-99240.** It was asked whether the case of a 3G subscriber roaming into a 2G network has been considered. This scenario is assumed to be supported, as part of the Scope of the 3GPP. With this, the presentation was noted.

**Document SP-99286** LS from TADIG on UMTS Charging. SA WG5 were asked to look after this work and to liaise with TADIG and BARG on the subject of UMTS Charging.

**Document SP-99287** – this was a duplication of **Document SP-99240** and was withdrawn.

**Document SP-99220** LS from ETSI EP UMTS on Activities in EP UMTS. This Liaison statement is for Information. The SA Chairman read out the document. It was noted that 3GPP would be responsible for writing of the standards and that ETSI EP UMTS will provide requirements and proposals for the content of future phases of the 3rd generation systems. With this, the document was noted.

**Document SP-99219** and **Document SP-99218** – Liaison statements on later phases of UMTS. This was moved to agenda item 6.7 (Beyond Release 1999).

**Document SP-99312** LS from ITU ad-hoc contact person on the ITU-R TG8/1 revision of Recommendation M.1079. TSG RAN asks TSG SA to develop detailed contribution(s) to comment and propose changes to the present revision of Recommendation M.1079. These need to be submitted in good time for the next TSG RAN meeting #5, October 6-8 1999, so that these in turn can then be submitted to TG8/1 according to the 3GPP working procedures.

TSG SA decided to forward this to SA WG2 to deal with this liaison, with input from SA WG1 and SA WG4.

### 4.3 Others

Mr A. Watson provided a verbal report on the activities of the UMTS Forum. A market survey on the spectrum needs was presented at the previous TSG SA Meeting, and the forecasts are believed to be valid today. A new survey to forecast the roll-out priorities will be undertaken, in order to prioritise the standardisation activities. Ms. P. Tonelli (AirTouch) will be in charge of this work. The UMTS Forum has also made 2 press releases: one on the decision of the Organisational Partners, and one welcoming the new Partners to the 3GPP (China as an Organisational Partner and the GSM Association as a Market Representation Partner). This presentation was noted.

No other contributions were received.

## 5 Reports from TSG SA Working Groups

### 5.1 TSG SA WG1

#### 5.1.1 Report from TSG SA WG1

Mr Alan Cox, SA WG1 Chairman, presented his report, contained in **Document SP-99224.**

SA WG1 have held 2 meetings and much e-mail discussion since the last TSG SA meeting. The main focus of SA WG1 has been completion of Release 1999.

The SA WG1 Chairman reported that:

- Use of GSM SIM in UE has been discussed in SA WG1, but no consensus has yet been reached.
- Some companies want to forbid this use, others support the compromise reached at the SA#3 meeting.

There has been similar discussion in GSM-A SERG - some preferred to forbid it, but all agreed to the compromise - see LS in **Document SP-99240.**

Future work was outlined as follows:

- Plan to examine all outstanding work items and proposals at next S1 meeting.
- Only iterations & corrections for Release 1999.
- This may include agreeing consistent terminology for e.g. UE or ME.
- Major brainstorming and planning for Release 2000.

Inputs are requested from all sources on the roaming issues for the Quebec meeting of SA WG1 (5-9 July 1999).

### 5.1.2 Questions for advice and decisions from TSG SA WG1

**Document SP-99242** on Dual Mode USIM, proposing that the inclusion of the GSM SIM functionality in USIM cards should be made mandatory, was discussed.

TSG SA noted that in order to allow most efficient compatibility of phases the definition of the USIM requirements need to be flexible. Backward compatibility with different phases is the assumed goal, and SA WG1 is studying this. Equivalence in products (e.g. GSM and 3G) is also desirable for efficient manufacture of products and for a smooth introduction of 3G cards into the market place.

**Document SP-99238** LS from SA WG1 to ETSI SMG on the transfer of some ETSI SMG1 specifications and reports (GSM 02.xx series) to 3GPP. The liaison includes a list of specifications to transfer to SA WG1 and specifications to remain in SMG1.

It was questioned whether the proposed transfer of these specifications was in line with the original ETSI mandate for work to be transferred to 3GPP. This is an ETSI matter, and it was reminded that non-duplication of work is also a principle of the creation of the 3GPP. It was noted that the proposal was based on the practical experience obtained after the work done so far.

It was asked whether this proposal means that 3GPP take the specifications and develop them within their groups, and SMG would be responsible for final approval. It was clarified that the documents would be maintained in 3GPP, and SMG would receive them as a transfer to the SDOs.

The list requires checking and refinement in order to identify the exact list to be transferred.

**It was agreed to propose to ETSI SMG that these specifications are transferred to 3GPP.**

**Document SP-99239** – this contribution was covered by the treatment of **Document SP-99225**, which was approved.

### 5.1.3 Approval of contributions from TSG SA WG1

The following CR to TS 22.101 were presented in **Document SP-99225**:

| CR number | Subject | SA Decision |
|---|---|---|
| 22.101 CR019 | Addressing | Approved |

The following CRs to TS 22.100 and TS 22.101 were presented in **Document SP-99226**:

| CR number | Subject | SA Decision (see comments) |
|---|---|---|
| 22.100 CR019 | Emergency Calls | Approved |
| 22.101 CR020 | Emergency Calls | Approved(1) |

comments

(1) SA WG1 to check the clarity of the term “Stored in the ME” or whether it should be more explicit.

The following CR to TS 22.100 was presented in **Document SP-99227**:

| CR number | Subject | SA Decision |
|---|---|---|
| 22.100 CR021 | Fax requirements | Approved |

The following CR to TS 22.100 was presented in **Document SP-99228**:

| CR number | Subject | SA Decision (see comments) |
|---|---|---|
| 22.129 CR001 | Handover | Rejected (2) |

comments

(2) The proposal of user-control of inter-PLMN handovers was considered as against the proposed separation of PLMN selection and handover/cell selection. The GSM Association are looking at charging aspects of inter-PLMN handovers and input can be expected from them to SA WG1.

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The following CR to TS 22.101 and TS 22.100 were presented in **Document SP-99229**:

| CR number | Subject | SA Decision |
|---|---|---|
| 22.101 CR021 | Numbering | Approved |
| 22.100 CR020 | Numbering Scheme | Approved |

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The following CR to TS 22.100 was presented in **Document SP-99230:**

| CR number | Subject | SA Decision (see comments) |
|---|---|---|
| 22.105 CR013 | QoS | Approved (3) |
| 22.105 CR014 | QoS | Approved (3) |

comments

(3) The values given in Tables 1, 2 and 3 shall be reviewed as they have not been agreed by SA WG2. The values shall be marked to indicate that the values may be modified after review by SA WG2.
The output of the SA WG2 QoS Ad-hoc meeting should be forwarded to the SA WG1 meeting in Quebec by 7th July for updating these values. Any resulting change to be sent to TSG SA#5 meeting, with copy to TSG RAN and GSMA-BARG.

**The revised CR is given in Document SP-99324)**.

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The following CR to TS 22.100 was presented in **Document SP-99231**:

| CR number | Subject | SA Decision |
|---|---|---|
| 22.100 CR015 | Re-negotiate QoS | Approved |

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The following CR to TS 22.100 was presented in **Document SP-99232**:

| CR number | Subject | SA Decision |
|---|---|---|
| 22.100 CR018 | Relationship between UMTS 22.100 and other 22. xx document series | Approved |

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The following CR to TS 22.100 was presented in **Document SP-99233**:

| CR number | Subject | SA Decision |
|---|---|---|
| 22.100A017 | Security | Approved |

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The following CR to TS 22.100 was presented in **Document SP-99234**:

| CR number | Subject | SA Decision |
|---|---|---|
| 22.100 CR016 | SMS | Approved |

The following CR to TS 22.100 was presented in **Document SP-99235**:

| CR number | Subject | SA Decision |
|---|---|---|
| 22.907 CR002 | TE smart card - Technical report is not to be maintained | Approved |

**Document SP-99237** - TS 22.121 Version 2.0.0 (VHE specification) presented for approval. **The document was approved as version 3.0.0 and is placed under TSG SA Change Control.**

### 5.2 TSG SA WG2

#### 5.2.1 Report from TSG SA WG2

The SA WG2 Chairman, Mr T. Jarvela, presented the report of SA WG2, given in **Document SP-99328** (replaces Document SP-99305). Liaison statements received and sent are contained in **Document SP-99307**. SA WG2 have decided to select one single multimedia protocol for UMTS CS (on top of GSM CC) and one single multimedia protocol for UMTS PS (on top of GSM SM) and that there will be no re-use of the GSM GPRS LLC layer for UMTS PS.

SA WG2 ask all groups to review the document (**Document SP-99306**) which contains SA WG2 proposals for the transfer of Stage 2 Specifications from GSM towards UMTS.

SA WG2 have decided to create a number of ad-hoc groups to work on the Technical Co-ordination of the different aspects of the 3GPP work. (Security, Packet architecture, Services and Service platforms, QoS, Location based services, UMTS/GSM interoperation, Transport concept, Mobility, Bearer Services, Circuit architecture). These groups are not intended to have many physical meetings, but electronic working (e.g. e-mail) is expected to be the usual practice for them. The main aim of the groups is to create Project Plans for each task. Participation is required from the working groups (a nominated person, or the WG Chairman).

The work of the ad-hoc groups will be reported to SA WG2 for discussion and the Project Plans will be circulated with other groups in the TSGs, in order to have an agreed overall Project Plan.

Following some questions, it was clarified that the ad-hoc groups will gather information from the other groups, but that contact points are needed in order to receive the information and construct the Project Plans. It is not expected that these nominated people will travel to physical meetings as a rule, but will work by correspondence (e-mail, telephone, etc.).

UMTS 23.20 v 1.8.0 has been split into TS 23.121 v 2.0.0 and TR 23.920 V2.0.0. UMTS 23.01 has been transferred to TS 23.101 v.3.0.0 (**Document SP-99299**).
UMTS 23.10 is transferred to TS 23.110 v.3.1.0 (**Document SP-99300**).
UMTS 23.30 is transferred to TR 23.930 V2.0.0 (**Document SP-99262**).
UMTS 23.07 is transferred to TR 23.907 V1.1.0 (**Document SP-99322**, replacing SP-99301).
UMTS 23.27 is transferred to TR 23.927 V0.1.0 (**Document SP-99304**).
UMTS 23.25 is transferred to TR 23.925 V0.2.0 (**Document SP-99303**).

TR 23.923 v.0.6.0 - “MIP report” was provided for information in **Document SP-99302** and was noted.

Questions raised after the presentation identified that a number of critical issues in relation to the architecture (TS 23.121) for Release 99 have not yet been completed. The document needs to be reviewed to see if any key issues are not ready. A number of comments indicated that some additional work was need in order to provide the necessary frame work for TSG CN.

It was pointed out that TR 23.920 still contains key issues for release 99 amongst those security issues which are considered important. TSG SA expressed its concern over that SA WG2 have not been able to solve this issues. It was noted that it was the hope of SA WG2 that the creation of the SA WG2 ad-hoc group to look at Security can solve this. A request for visibility on the completion of the security features was made. It was repeated that the ad-hoc groups have been set-up to do this, and the Security Ad-hoc group will produce the Project Plan for Security aspects with a goal to meet the project time-scales. A request for a schedule of the ad-hoc groups milestones was made. It was explained that the group has only been set up one week ago and the schedule is not yet available.

It was stated that SA WG2 should provide the architecture, but they do not need to consider the priorities of the tasks within the other WGs to achieve this. The task prioritisation should be done in the respective WGs, where the resources can be allocated. It was stated that there is a need for project plans with milestones and priorities and that this should be done at the current TSG SA meeting, in order to give TSG CN enough time to complete their work.

In summary: TS 23.121 could be taken by CN for implementation noting that some issues are still missing. Any problems found should be reported back to SA WG2. In order to speed-up the work and to provide TSG_SA with are more complete picture, an ad-hoc group including the relevant chairs was set up to identify the open issues which requires immediate action by TSG SA WG2. The results of the ad-hoc groups were provided in **Document SP-99336**.

SMG2 SA WG2 issues on GSM/3G handover / dual mode operation was raised – this is expected to be on the list of issues produced by the above discussion.

The report of SA WG2 was not approved due to the lack of reporting of the delays in completion of the Release '99 issues. The SA WG2 Chairman was asked to ensure that all relevant issues are included in future reports.

A list of the newly formed SA WG2 project co-ordination ad-hocs was provided for information in **Document SP-99329**.

### 5.2.2 Questions for advice and decisions from TSG SA WG2

**Document SP-99306** Transfer of Stage 2 Specifications from GSM towards UMTS. This document requires review by different groups and feedback is requested by SA WG2.

SA WG1 Chairman asked if SA WG2 had included comments received from SA WG1. It was reported that comments have been included, but that more comments are requested for the resulting document presented here.

A similar exercise was considered necessary for some of the stage 1 descriptions and SA WG1 are asked to do this.

TR 23.907 v.1.1.0 (**Document SP-99332** (replaces Document SP-99301)) “QoS Concept” was presented for information. The document was noted and delegates were asked to consider the document and make comments as it is near finalisation.

**Document SP-99328** (replaces SP-99305). Revised report of SA WG2. Changes from the previous version are marked with underline. The document was noted.

**Document SP-99329** provided for information on request of the meeting. Revisions are shown in underline, (minor updates of known names). The document was noted.

**Document SP-99336** “System Architecture Issues identified to be solved urgently within TSG-S2”. This is the result of the drafting group on Release 2000 requirements.

> **Delegates are requested to review TS 23.121 and to provide contribution to the SA WG2 meeting in New Jersey July 26-30.**

The issues identified cannot be solved without constructive contribution to the meeting and Companies are asked to support this important work.

Time schedule: Due to urgency, the next milestone is the next SA WG2 meeting, and issues are hoped to be solved there, if they are not, then August will be the last date.

**SA WG2 are asked to provide a report on the progress to the TSG e-mail lists and other relevant groups after each SA WG2 meeting. This was agreed by the SA WG2 Chairman.**

It was commented that inter-system roaming is missing from the list. It was clarified that the list is not final and this should be the subject of contribution to the SA WG2 meeting.

**TSG SA endorsed this contribution and asks SA WG2 to endeavour to complete the work at their next meeting, or at their August meeting at the latest.**

### 5.2.3 Approval of contributions from TSG SA WG2

The following documents were presented to TSG SA for approval:

TS 23.121 v2.0.0 (**Document SP-99290**) "Architectural Requirements for Release 1999". This specification was approved (as version 3.0.0) and placed under TSG SA Change Control **(**)**.

There were many comments related to the formatting and content of the document. It was explained that the document has been presented for approval as it is urgently needed and the document has not been completely finalised editorially. The document reflects the consensus of SA WG2.

**(**) It was recognised that there was some concerns on the stability of sections 7.2.2.1, 7.4.2, and 7.10. These sections are considered to be for further study.**

It was pointed out that there were no concerns raised in SA WG2 meeting where the document was approved for presentation to TSG SA as version 2.0.0.

It was noted that there are a number of editorial items which will need to be corrected by CRs. Due to the urgent need for the document, it was decided to approve it even though it was below the standard normally expected for documents for approval.

TR 23.920 v2.0.0 (**Document SP-99291**) "Evolution of the GSM platform towards UMTS". This report was approved (as version 3.0.0) and placed under TSG SA Change Control.

The report was considered technically stable and in need of some editorial work.

TR 23.930 v2.0.0 (**Document SP-99262**) "Iu Principles" This report was approved (as version 3.0.0) and placed under TSG SA Change Control.

## 5.3 TSG SA WG3

### 5.3.1 Report from TSG SA WG3

The SA WG3 Vice Chairman, Adam Berenzieg, presented the report of SA WG3, given in **Document SP-99293**.

SA WG3 presented the following documents for approval and placing under TSG SA Change Control:

- 3G TS 33.106 V1.0.0 (**Document SP-99294**)
- 3G TR 33.901 V1.0.0 (**Document SP-99295**)
- 3G TS 33.105 V1.0.0 (**Document SP-99296**)

The following document was presented for Information:

- 3G TS 33.103 V1.0.0 (**Document SP-99297**)

The status of the algorithm design procedure was given.

Some questions on the time scales to delivery of the algorithm were asked. It was clarified that the full production and evaluation was expected to take 7 Months. It was requested that members would be able to obtain the algorithm during the evaluation period.

**PCG will be asked to allow distribution of the Algorithm during the evaluation period.**

The possibility of secure Terminal Identification, which would have cost implications (bandwidth due to Public Key techniques needed) was included. TSG SA was asked whether this is a service requirement.

Work Item priorities contained in **Document SP-99284** (Status of 3GPP security deliverables and priorities of work items) were questioned. It was reported that the priorities were those agreed by SA WG3 and any comments should be taken to SA WG3 meetings. SA WG2 Chairman reported that the 3GPP Project Plan for 3G Security is being created with the help of the SA WG3 Chairman.

The GSM Association have produced a liaison to TSG SA on Priorities in order to meet the time-scales (**Document SP-99317**), and have produced a list of security priorities as follows: Mutual Authentication, Longer Key length, SS7 Security and Network wide encryption.

It was recognised that the Security Requirements will impact TSG CN in the main part, and some close liaison between SA WG3 and TSG CN is needed. TSG CN Chairman asked for clear guidance on the Priorities from SA WG3 with input from SA WG2. The SA W2 Chairman reported that the Security ad-hoc group has a specific task to identify priorities for Security Features for the December 1999 release.

The CN Chairman proposed that the August SA WG3 meeting invite CN delegates for discussion on this. This was agreed by TSG SA as a practical approach. There was a request also for involvement from T WG3 in the prioritisation of security requirements.

User Identity Confidentiality mechanism was questioned. It was clarified that the current GSM mechanism is not considered good enough for protection against determined attacks. It was also clarified that the implementation will be optional, as in the GSM case.

**Document SP-99265** – "Inclusion of the new security mechanisms in Release 99" was then introduced by Mr. R Thomas (France Telecom).TSG SA agreed with the Service requirements given in this Contribution, as they corresponded to the current thinking. The SA3 Vice Chairman reported that it is expected that this work can be done with no impact on the Core Network.

It was pointed out that the securing of Terminal Identities (IMEI Security) needs to be improved in order to allow these security features to be useful.

> **The reply to SA WG3 was that the Terminal Security is thought to be important by TSG SA and the security of the IMEI requires investigation.**

SA WG3 will ask for progress reports from ETSI SAGE on the progress of the Algorithm work.

### 5.3.2 Questions for advice and decisions from TSG SA WG3

**Document SP-99317** from SERG and GSM Association on Service Requirements for Security in UMTS. This was dealt with under agenda item 5.3.1.

### 5.3.3 Approval of contributions from TSG SA WG3

**Document SP-99294** 3G TS 33.106 V1.0.0 "Lawful Interception Requirements" was presented to TSG SA for approval. The document was approved (as version 3.0.0) and placed under TSG SA Change Control. TSG CN are asked to consider this document and comment to SA WG3.

**Document SP-99295** 3G TR 33.901 V1.0.0 "Criteria for cryptographic algorithm design process" was presented to TSG SA for approval. The document was approved (as version 3.0.0) and placed under TSG SA Change Control. This will provide input to ETSI SAGE (who will have International co-operation)

**Document SP-99296** 3G TS 33.105 V1.0.0 "Cryptographic Algorithm Requirements" was presented to TSG SA for approval. The document was approved (as version 3.0.0) and placed under TSG SA Change Control.

**Document SP-99297** 3G TS 33.103 V 1.0.0 "Integration Guidelines" was presented for information. This document was noted and other groups are asked to consider it and input comments to SA WG3 in order to complete it for approval at the next TSG SA meeting.

The following CRs to TS 33.102 were presented in **Document SP-99308**:

| CR number | Subject | SA Decision |
|---|---|---|
| 33.102 CR001 | Mechanism for data integrity of signalling messages | Approved |
| 33.102 CR002 | Description of layer on which ciphering takes place | Approved |
| 33.102 CR003 | Conditions on use of authentication information | Approved |
| 33.102 CR004 | Modified re-synchronisation procedure for AKA protocol | Approved |
| 33.102 CR005 | Sequence number management scheme protecting against USIM lockout | Approved |
| 33.102 CR006 | Criteria for Replacing the Authentication “Working Assumption” | Approved |
| 33.102 CR007 | Functional modification of Network domain security mechanisms | Approved |
| 33.102 CR008 | Cipher key lifetime | Approved |
| 33.102 CR009 | Mechanism for user domain security | Approved |
| 33.102 CR010 | Replacement of incorrect diagrams | Approved |
| 33.102 CR011 | Precision of the status of annex B (informative) | Approved |

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It was reported that the comments received from SA WG2 were not dealt with during the last SA WG3 meeting due to lack of time. The comments will be taken into account at the next SA WG3 meeting and more CRs produced if necessary.

**SA WG3 are asked to check the use of terminology in their documents with reference to the (TSG RAN) Vocabulary document.**

### 5.4 TSG SA WG4

#### 5.4.1 Report from TSG SA WG4

Mr. A. Ohana, Chairman of SA WG4, introduced **Document SP-99260**, the report of SA WG4. Presentation slides are included as an annex to this document.

Hosts are required for the remainder of meetings this year and companies are asked to check the possibility of hosting them.

SA WG4 presented the following specifications for approval:

TS 26.071 V2.0.0 AMR Speech Codec; General Description (**Document SP-99244**).

TS 26.090 V2.0.0 AMR Speech Codec; Transcoding functions (**Document SP-99245**).

TS 26.091 V2.0.0 AMR Speech Codec; Error Concealment of lost frames (**Document SP-99246**).

TS 26.092 V2.0.0 AMR Speech Codec; Comfort noise aspects (**Document SP-99247**).

TS 26.093 V2.0.0 AMR Speech Codec; Source Controlled Rate operation (**Document SP-99248**).

TS 26.110 V2.0.0 Codec for Circuit Switched Multimedia Telephony Service; General Description (**Document SP-99249**).

TS 26.111 V2.0.0 Codec for Circuit Switched Multimedia Telephony Service; Modifications to H.324 (**Document SP-99250**).

TR 26.911 V2.0.0 Codec(s) for Circuit Switched Multimedia Telephony Service; Terminal Implementor’s Guide (**Document SP-99251**).

The following specifications were presented for information:

TS 26.074 V1.0.0 AMR Speech Codec; Test Sequences (**Document SP-99252**).
This includes Test Sequences for ENS VAD option only.

TS 26.101 V1.2.0 AMR Speech Codec; Frame Structure (**Document SP-99253**).
Many modifications have been made compared to the previous version.

TR 26.912 V1.0.0 QoS for Speech and Multimedia Codec; Quantitative performance evaluation of H.324 Annex C over 3G (**Document SP-99254**).

It was reported that TS 26.073 V0.3.0 “ANSI C-Code” and TS 26.094 V0.1.0 “Voice Activity Detector” are available as internal SA WG4 drafts and that limited editorial work is needed. Presentation for approval has been postponed until the decision on Voice Activity Detector (VAD) in ETSI SMG.

TS 26.102 V0.2.0 “Interface to Iu and Uu” is available as an internal SA WG4 draft and that the final content is dependent of the definition of support of speech service over the Radio Access Network.

TR 26.901 “Performances Characterisation” cannot progress until the required funding to perform the corresponding tests has been identified and the support of the speech service over the Access Network is fully specified. The preparation of a Test plan is was transferred to the ETSI SMG11-SQ group.

Regarding the support of the service over the Access Network, it was clarified that this activity was under the responsibility of TSG-RAN WG2 and WG3.

It was noted that the title of TS 26.093, reported in the slide presentation should read:

"SP-99248: TS 26.093 Ver. 2.0.0: Source controlled rate ~~adapation~~ operation".

Note: On the same slide (#12), the titles of documents SP-99246 and SP-99247 were swapped.

It was questioned whether the impact of the adaptation mechanism should not be included in the evaluation of the AMR Codec in a CDMA system. It was explained that when the AMR Codec is reused from GSM, it is only the Multi Rate Codec part which is reused, as the characteristics of the CDMA radio channel are different to those of a GSM radio channel. Furthermore, in a CDMA system, the objective is to keep the the quality of the channel (C/I) more or less constant under normal operation. This means that the different Codec rates are more to be used by the operator to select a combination of quality and capacity, than to be used for dynamic rate allocation.

SA WG4 also considered the key specifications for the support of the circuit-switched H.324 based Multimedia Telephony service (TS 26.110, TS 26.111 and TR 26.911) stable and they were presented to TSG SA for approval. The specification gathering the related Call Set-Up Requirements had been sent to CN WG1 and CN WG2 for comments and consideration.

SA WG4 held preliminary discussions on real-time packet Multimedia services. A Liaison had been sent to SA WG2 and RAN WG3 to help the debate on the support of Unequal Error Protection for Packet services. In the meeting it was clarified that unequal error protection could be obtained by mixing bearers with different protection levels.

A preliminary version of the Performance Evaluation Report of H.324 Annex C over 3G, based on the tests sponsored by ARIB in 1Q99 was presented to TSG SA for information.

The ETSI SMG11 AMR Wideband feasibility report had been reviewed in SA WG4#5 meeting and considered to be in line with the 3GPP Wideband Codec project objectives. It had been decided to prepare for the next meeting, a set of 3G Wideband Codec Performance Requirements as input to a joint ETSI SMG/3G Wideband Codec development project.

Tandem Free Operation in 3G and between 2G and 3G systems. It was reported that for TFO, the drafting of the specification cannot start until the AMR TFO definition has been finalised. This task should be completed in 3Q99. The 3G specifications could then be derived from the GSM specifications on time for the approval of Release 99.

### 5.4.2 Questions for advice and decisions from TSG SA WG4

**Document SP-99255** - LS to TSG SA on “Transfer” of AMR Specifications. There has been no decision to transfer the GSM specifications on AMR to SA WG4.

It was noted that separate specifications would require the users to compare specifications in order to determine if, and where, there were differences. TSG SA saw for the time being no possibility to require common AMR specifications for GSM and 3G, even though it would be preferable. But if future developments show that the single specification can be obtained, this should be sought by SA WG4.

> **SA WG4 are asked to co-operate as much as possible with SMG11 and study the feasibility of having common specifications.**

**Document SP-99256** AMR 3G Characterisation Funding. SA WG4 have evaluated the requirements for this work and ask TSG SA to help with finding the resource (55 KEUR is estimated). Each Codec mode would be evaluated over different propogation conditions, in error-free and in 3G error conditions. The tests would be performed as two subjective listening tests in two different languages.

**It was decided that this request for funding would be forwarded to the PCG with other requests for funding. The TSG SA Chairman encouraged interested parties to provide funding for this and other purposes.**

### 5.4.3 Approval of contributions from TSG SA WG4

Documents for Approval:

**Document SP-99244** TS 26.071 V2.0.0 "AMR Speech Codec; General Description" was presented to TSG SA for approval. The document was approved (as version 3.0.0) and placed under TSG SA Change Control.

**Document SP-99245** TS 26.090 V2.0.0 "AMR Speech Codec; Transcoding functions" was presented to TSG SA for approval. The document was approved (as version 3.0.0) and placed under TSG SA Change Control.

**Document SP-99246** TS 26.091 V2.0.0 "AMR Speech Codec; Error Concealment of lost frames" was presented to TSG SA for approval. The document was approved (as version 3.0.0) and placed under TSG SA Change Control.

**Document SP-99247** TS 26.092 V2.0.0 "AMR Speech Codec; Comfort noise aspects" was presented to TSG SA for approval. The document was approved (as version 3.0.0) and placed under TSG SA Change Control.

**Document SP-99248** TS 26.093 V2.0.0 "AMR Speech Codec; Source Controlled Rate operation" was presented to TSG SA for approval. The document was approved (as version 3.0.0) and placed under TSG SA Change Control.

**Document SP-99249** TS 26.110 V2.0.0 "Codec for Circuit Switched Multimedia Telephony Service; General Description" was presented to TSG SA for approval. The document was approved (as version 3.0.0) and placed under TSG SA Change Control.

**Document SP-99250** TS 26.111 V2.0.0 "Codec for Circuit Switched Multimedia Telephony Service; Modifications to H.324" was presented to TSG SA for . The document was approved (as version 3.0.0) and placed under TSG SA Change Control.

**Document SP-99251** TR 26.911 V2.0.0 "Codec(s) for Circuit Switched Multimedia Telephony Service; Terminal Implementor's Guide". The document was approved (as version 3.0.0) and placed under TSG SA Change Control.

Documents for Information:

**Document SP-99252** TS 26.074 V1.0.0 "AMR Speech Codec; Test Sequences" was noted.

**Document SP-99253** TS 26.101 V1.2.0 "AMR Speech Codec; Frame Structure" was noted.

**Document SP-99254** TR 26.912 V1.0.0 "QoS for Speech and Multimedia Codec; Quantitative performance evaluation of H.324 Annex C over 3G" was noted.

## 5.5 TSG SA WG5

### 5.5.1 Report from TSG SA WG5

Mr. A. Yuhan, Chairman of SA WG5 presented the report of SA WG5 activities, given in **Document SP-99310**.

Mr. M. Truss was elected as Chairman of the TMF Mobile Group. A full list of officials is given in the report presentation.

SA WG5 proposed 4 new work items for approval.

3G TS 32.101 V1.1.2 and 3G TS 32.102 V 1.1.2 are presented to TSG SA for Information. These documents will be part of the June 1999 specification set and placed on the June 99 area of the FTP server, but are not presented at this meeting again for information.

A question on the content of Release 99 was asked. It was clarified that the O&M high-level documents would be completed. It was noted that O&M specifications are also being developed by TSG RAN. TSG RAN elaborates the detailed technical O&M specifications for the Radio Access Network part.

The SA WG5 Chairman stressed that due to the amount of work and time-scales for the work, SA WG5 need all the support and feedback it can get, especially from the Operators. The meeting had noted that the GSM Association had already indicated its commitment to support this work.

It was discussed that O&M specifications may need to lag behind the Core specifications, as they are dependent on these. TSG SA considered that any slip should be minimised and not exceed 3 months. In principle, the O&M Specifications shall be available for the Release 99 in December 1999, although this of course would be dependent upon the finalisation of the Core Specifications.

### 5.5.2 Questions for advice and decisions from TSG SA WG5

SA WG5 asked for discussion on Terminal/SIM management concept, this is reported under agenda item 5.5.3.

### 5.5.3 Approval of contributions from TSG SA WG5

New Work Item Proposals:

NOTE: In the work item descriptions below, “first approved draft” refers to a version 3.x.y under TSG Change Control.

**Document SP-99271** Charging and accounting. This work Item was approved with a revised completion date of December 1999 (Q4/99). Co-operation between the GSM Association, TSG RAN and TSG CN, and other relevant groups should be sought to achieve this time-scale.

**Document SP-99272** Fault management. This work Item was approved.

**Document SP-99273** Configuration management. This work Item was approved.

**Document SP-99274** Performance management. This work Item was approved.

**Document SP-99275** Terminal/SIM Management (potential O&M feature). It was recognised that a large study and much discussion would be necessary to pursue the ideas presented in this proposal.

Especially, a number of comments were received concerning Legal Aspects, ownership of terminals, etc. clearly indicating that this item needs a more detailed study before any decision on if and how to proceed with this issue.

SA WG5 were asked take into account the comments received from TSG SA and if they consider it necessary, can create a work item on a feasibility study for approval by TSG SA. It was stressed that this would have to take a lower priority than the urgent work already being undertaken in the 3GPP.

## 5.6 Review of TSG SA work programme

**The Chairman reminded delegates that the work of any committee is reliant upon the commitment of the delegates and their companies to do the work decided upon in the meetings. On this background the delegates were urged to ensure that the required contributions are submitted to the relevant groups.**

**Furthermore, the Chairman noted that the preparation of contributions to the Plenary meetings requires time before the meeting for both the delegates and the support team which means that WG meetings should not be held the week before and the week after the Plenary meeting. The enforcement of this rule should not be more strict than: exceptions can be made, if acceptable to the Chairman of the group in question, the Support Team and, not least, the delegates.**

## 5.7 Letters to other groups

No letters were drafted.

### 5.8 Other issues

**Document SP-99319** Proposal for MM services within UMTS. This contribution proposes that the system should:

- be transparent to MM services and applications;
- should provide a general bearer with negotiable attributes and end-to-end QoS as transport channel (e.g.: bit-rate, delay, BER, etc.) for MM applications;
- provide functions to download, store and execute application-specific coders and protocols (e.g. browser like API to load applets, plug-ins etc.) as well as functions to negotiate the bearer attributes and to upload information;
- may need to support basic multimedia service types to maximize quality and minimize capacity impacts on the radio interface;
- allow the operator to implement intelligent service control to enable their users to receive the service profile which the market needs, whether roaming or in the home network.

The importance of a transparent bearer was stressed, for use with Internet applications. There was some discussion over the choice of CODEC (H.323 based) proposed by the contribution, and a desire for flexibility in making the choice optional.

There was general support for this document as a policy, but some examination of the details was considered necessary. It was therefore decided to support the principle to work in this area, and forward the document to SA WG1 for further consideration and discussion of the requirements. The results should then be forwarded to SA WG2 and SA WG4.

Some comments were made on the creation of the Basic Multi Media service only, which may be inadequate for future Internet developments.

Detailed contributions were requested from interested parties in order to progress the work.

## 6 Technical co-ordination with TSG CN, TSG RAN and TSG T

### 6.1 TSG CN

#### 6.1.1 Report from TSG CN

Mr. H. Dettner, TSG CN Chairman presented his draft status report, given in **Document SP-99320**, using the presentation slides given in **Document SP-99321**. The structure of TSG CN has been re-organised to collect together the CAMEL work in a more efficient way (see **Document SP-99321**, slide 2. TSG CN reported that support was insufficient which may affect their output. The transfer of GSM Specifications is ongoing, the pure GSM issues have been identified as Supplementary service interworking and GSM/PLMN to ISDN, affecting GSM 09.12, 09.14 which will remain with ETSI SMG3. Handover and cell selection are still being investigated.

It was reported that the Out-of-Band Transcoder Control report has been delayed.

TSG CN had completed the feasibility study of the Gateway Location Register (GLR). TSG CN had then decided not to start specification work for the GLR for the time being. However, as some members of TSG CN had expressed strong interest in the GLR, it had been proposed to let the interested parties elaborate the specifications required for the GLR outside TSG CN and submit the result to TSG CN. This decision had caused some problems and the TSG CN raised the question to TSG SA of whether a vote on the issue would be a solution and if so, where it should take place (see agenda item 6.1.2).

TSG CN indicated that it was not fully clear, if the Follow-Me service was a GSM-only service or for both GSM and 3G. SA WG1 was asked to clarify the issue.

TSG CN reported that the scope of Release ‘99 is in a stabilisation process, alignment with other groups ongoing and detailed work on Release ’99 has started.

### 6.1.2 Questions for discussion in TSG SA

TSG CN had completed the feasibility study of the Gateway Location Register (GLR). TSG CN had then decided not to start specification work for the GLR for the time being. However, as some members of TSG CN had expressed strong interest in the GLR, it had been proposed to let the interested parties elaborate the specifications required for the GLR outside TSG CN and submit the result to TSG CN. This decision had caused some problems and the TSG CN raised the question to TSG SA of whether a vote on the issue would be a solution and if so, where it should take place.

The work item creation rules were questioned. Mr. A. Scrase explained that all decisions of a TSG, including creation of work items, needs consensus of the meeting. In addition, the creation of a work item requires 4 Supporting Members (who are expected to contribute actively to the work). Failure to reach consensus may mean that the TSG decides to hold a vote.

The TSG SA chairman indicated that votes are to be considered as an emergency solution when everything else has failed. First, an attempt shall be made to find a solution for which consensus can be obtained.

For this explicit case it seemed clear that the resistance to start work on the GLR was coming from operators not seeing the need for a GLR and fearing that the introduction would impact existing networks and other networks without a GLR.

On this background it was found, that there would be no problem, if a GLR could be done in a such way, that it had no impact on an existing HLR (pre-3G), if a subscriber belonging to a HLR roamed onto a network utilising a GLR. Similarly the support of the GLR in one network should not impact networks not utilising the GLR.

> **Based on this, TSG SA recommended that TSG CN adopt a work item on GLR requiring a GLR to be fully compatible with old and new non-GLR networks.**

SA WG2 was asked to take note of this recommendation and provide for the results of the work in their documentation.

**Document SP-99269** Optimal Routing. This proposes to task CN WG2 to study the extension of current prepaging under the aspect of a general OR solution, to outline the feasibility of such an approach. And TSG CN to study the aspect of prepaid and to outline the feasibility of such an approach.

TSG CN Chairman agreed that TSG CN could study this and the results could be used to determine whether prepaging could be included, depending on sufficient contribution to the work. It was recognised that this is unlikely to be achieved for release ’99, but would be included if considered feasible and achievable.

**Document SP-99325** “Co-operation with ITU-T”. This contribution discusses how 3GPP can produce a cohesive standard in co-operation with ITU-T. It proposes that the most appropriate group to deal with the expectations from ITU-T is CN WG1. TSG SA is asked whether 3GPP specifications should be submitted directly to the ITU-T or whether this should be done by each SDO after transfer to them. It also asks whether contributions should be sourced 3GPP or the Member Companies of 3GPP and ITU-T.

It is expected that the ITU-T will produce Recommendations by direct reference to IMT-2000 specifications produced in different bodies.

> **It was recognised that the submission of specifications to ITU-T would be facilitated by allowing 3GPP to do so directly, rather than via the SDOs, and the PCG will be asked for agreement to take this approach.**

**Document SP-99333** “Template for Endorsement of Referencing of 3GPP specs by ITU”.

This contribution suggests that TSG SA should recommend to the participating SDO’s that they send either joint or individual liaisons into ITU-R TG 8/1 and ITU-T SG11 supporting the use of directly referencing 3GPP specifications by the ITU.

It is requested that the 3GPP SDOs send a liaison to ITU-T stating that they support direct submission of specifications to the ITU by 3GPP.

> **The principle is endorsed by TSG SA and the PCG will be asked to approve this.**

### 6.1.3 Information on status and changes to deliverables

A status list containing the June 1999 release is contained in Annex D.

### 6.2 Report from TSG RAN

#### 6.2.1 Report from TSG RAN

Mr. Y. Furuya, TSG RAN Chairman, presented his report, given in **Document SP-99313**, using the presentation slides given in **Document SP-99314**. At the TSG RAN Meeting #4, 12 specifications were approved (at version 3.0.0 and under TSG RAN Change Control). Chip rate and a downlink pilot structure modifications had been proposed and agreed in TSG RAN. It had also been agreed to identify the hooks and extensions for ANSI-41 core network to be included in Release'99. With these decisions, the work of TSG RAN had implemented the technical parts of the "OHG agreement".

Many specifications are at version 2.x.y in RAN WG1, in order to avoid a large number of Change Requests which will result in approval at version 3.0.0. Only a small number of modifications are anticipated due to the chip rate change.

TSG RAN has agreed to standardise both CTP/IP and SS7 as options for the Iur.

TSG RAN reported that more 3GPP Support resources are needed for the efficient running of the working groups.

ITU-R have decided to refer to 3GPP specifications and have requested that TSG RAN have stable specifications by October 1999. This has lead to a review of the RAN Work Programme resulting in the following conclusions:

- generally, the work items are in line with ITU-R deadline;
- the TDD RF parameter work plan was changed;
- A lower chip rate on TDD has been proposed by China which was discussed regarding the ITU-R deadline, but as no Chinese delegates were present at the meeting, TSG RAN could not discuss this in detail.

It had been agreed that TSG RAN will try to approve the specifications relevant for ITU-R at the October 1999 meeting.

**OHG Issues:** Based upon the OHG output (the "OHG agreement"), member companies had proposed modification of Chip rate, downlink pilot and proposed a study of hooks and extensions for a ANSI-41 core network to use UTRA (RP-99402 contained in **Document SP-99315**). Analysis's from RAN WG1 and RAN WG4 had shown that the changes would not impact the schedule for release '99 (RP-99320 and RP-99383 contained in **Document SP-99315**). Further TSG RAN had received an analysis of the impact of hooks and extensions for ANSI-41 (RP-99398 contained in **Document SP-99315**). This analysis shows that introduction of these hooks and extensions do not require major changes to UTRAN and therefore are not expected to cause any delay to release '99. In order to collect all requirements for hooks and extensions TSG RAN had agreed to hold a workshop. As ANSI-41 expertise and interest in using UTRA with an ANSI-41 network exist outside 3GPP, it was therefore suggested that TSG SA ask the PCG to invite members from outside of 3GPP.

#### 6.2.2 Questions for discussion in TSG SA

The question of Copyright for the RAN documents in the ITU was raised. It was clarified that the 3GPP does not have copyright on the documents, but the copyright will be held by the Partners when they take the 3GPP output and publish them in their SDO. SDOs can release copyright to the ITU. It was explained that the ITU would wish to refer to the 3GPP documents directly, in order to avoid the possibility of the SDOs making any changes to the documents received from 3GPP before publication (see also agenda item 6.1.3).

> **It was decided that this is a subject for the PCG to resolve and the matter will be referred to them for decision on the way forward.**

A question on the agreement to standardise both CTP/IP and SS7 as options for the Iur was asked. It was clarified that operator would have the option of which system to implement, but the consequences for manufacturers would be that they need to implement both options It was further explained that TSG RAN had abstained from making the one or the other of the options mandatory, as that might mean that an operator using the other option would have to have implemented the support for an unused configuration, just in order to be compliant with the standard. TSG RAN had felt that this would imply an unnecessary cost, and operators could force their suppliers to commit to be able to upgrade the equipment with the unimplemented choice later.

Based upon the OHG output (the "OHG agreement"), member companies had proposed modification of Chip rate, downlink pilot and proposed a study of hooks and extensions for a ANSI-41 core network to use UTRA (RP-99402 contained in **Document SP-99315**). Analysis's from RAN WG1 and RAN WG4 had shown that the changes would not impact the schedule for release '99 (RP-99320 and RP-99383 contained in **Document SP-99315**). Furthermore, TSG RAN had received an analysis of the impact of hooks and extensions for ANSI-41 (RP-99398 contained in **Document SP-99315**). This analysis shows that introduction of these hooks and extensions do not require major changes to UTRAN and therefore are not expected to cause any delay to release '99. In order to collected all requirements for hooks and extensions TSG RAN had agreed to hold a workshop. As ANSI-41 expertise and interest in using UTRA with an ANSI-41 network exist outside 3GPP, therefore it was suggested that TSG SA ask the PCG to invite members from outside of 3GPP.

All in all, the impacts are not expected to influence the current time plan in 3GPP for release '99. It has also been shown that the necessary work is limited to the UTRA radio interface specifications. There should be no implications on the bearers and services provided by UTRAN. Therefore no impact is expected on the work of TSG SA and TSG CN.

**On this background, TSG SA supported the decisions of TSG RAN and will recommend to the PCG that the invitation to the proposed workshop is send to relevant groups outside 3GPP.**

**Document SP-99316** "Plan to handle the OHG harmonisation proposal in 3GPP". TSG RAN invited TSG SA to endorse this plan. The summarised work plan is given in item 4 of **Document SP-99316**. An open workshop on Hooks and extensions is planned for 24-26 August 1999 (date subject to change).

**TSG SA endorsed this plan. The proposals will be forwarded to the PCG for approval.**

It was noted that work in relation to the hooks and extensions might be necessary in other groups than TSG RAN, but should await the results of the planned workshop on the issue.

**Document SP-99261** "OHG Agreement". The TSG SA Chairman asked the originator whether the document, which includes the complete "OHG agreement" already had been covered during the previous discussions or if the originator wanted to add anything. The originator confirmed that the document and the relevant parts of the "OHG agreement" had been fully covered.

### 6.2.3 Information on status and changes to deliverables

All delegates are requested to contact the 3GPP Support team to ensure that all documents are recorded on the FTP server for the June 1999 release (Status after TSG SA meeting #4).

## 6.3 Report from TSG T

### 6.3.1 Report from TSG T

Mr. S. K. Park, TSG T Chairman, presented his report, given in **Document SP-99281**, using the presentation slides given in **Document SP-99280**. A funding request for USIM testing was presented in **Document SP-99277** and for protocol conformance testing in **Document SP-99278**. TSG T asked for guidance on Harmonised regulatory standards for 3GPP terminals, given in **Document SP-99279**. The approach for Allocation of Application Identifiers (AIDs) had been debated and TSG SA was asked to endorse the approach to take (either 3GPP apply for a RID, or that the Partners maintain a list of AIDs for 3GPP. TSG T preferred the second approach). TSG T also requested some harmonisation of the Terminology used in 3GPP.

The transfer of GSM Specifications to 3GPP has been discussed by T WG3 but no final decision has yet been made for all of the specifications.

It was asked if the backwards compatibility of a UMTS terminal in a GSM-only environment has been discussed. It was reported that the roaming from 3G to 2G would need a USIM to be 2G compatible and at present the service requirement leaves this open. It was noted that the earlier discussed **Document SP-99265** covers this area for the Security aspects of SIM/USIM interoperability.

**It was decided that it is a requirement that a 3G-card (USIM) shall work in a 2G GSM only environment (both in a GSM-only terminal and a dual mode 3G-GSM terminal). SA WG1 was asked to add this to the service requirements, and T WG3 was asked to take this requirement into account.**

**Based on this discussions and earlier discussions in the meeting TSG_SA agreed the following general principles:**

- **As much backward compatibility as possible is aimed for.**
- **In order to ensure dual mode operation (3G-GSM), it is necessary that new developments are backwards compatible to the earlier phases of GSM. This would guarantee compatibility with existing equipment compliant with the specifications.**
- **It shall be possible to insert a 2G card (SIM) into a 3G terminal and access a 3G system (if the operator allows access with 2G cards (SIM)).**
- **It shall be possible to insert a 3G card (USIM) into a 2G terminal and access a 2G (GSM) network without requiring update of the 2G networks Network Elements, such as HLR and VLR.**

TSG T reported that it had been questioned whether 3GPP should be standardising a MM Messaging service. SA WG1 have requested T WG2 to examine the needs for MM Messaging and report back to SA WG1.

During the discussion of whether or not to standardise connectors for mobile terminals, it had been questioned how to interpret the statement from the organisational partners meeting that the items subject to standardisation in 3GPP are the items needed for global circulation. It was noted that this issue was not related to the general definition of global circulation.

### 6.3.2 Questions for discussion in TSG SA

**Document SP-99277** "Request for funding of USIM testing".

In order to ensure testing of the 3G card (USIM), GSM 11.17 needs, together with GSM 11.10, clause 27, to be re-written to be applicable to 3G. This specification is considered crucial to the success of the 3G system as it will assist providing interoperability between 3G-cards (USIM) and the different terminals. TSG T proposes to set up a Project Team to write the test specifications, co-ordinated by T WG1.

**TSG SA agreed to bring this request to the attention of the PCG. The TSG SA Chairman will investigate whether this can be handled within the 3GPP Support Team. Any offers for co-funding of this work should be addressed to the TSG SA Chairman or the head of the 3GPP Support Team.**

**Document SP-99278** "Funding for development of 3GPP TTCN specifications". This liaison statement highlights the need for test specifications written in the formal language TTCN and that to write TTCN test scripts requires dedicated specialists. This task is estimated to 6½ man years over the next 2 calendar years.

Without this funding it would be extremely difficult to test the resultant equipment.

**TSG SA agreed to bring this request to the attention of the PCG. The TSG SA Chairman will investigate whether this can be handled as a task associated with the 3GPP Support Team. Any offers for co-funding of this work should be addressed to the TSG SA Chairman or the head of the 3GPP Support Team.**

**Document SP-99279** "Request for guidance on Harmonised Regulatory Standards for 3GPP Terminals".

TSG T suggest that a single 'regulatory' document is needed that will meet or exceed the requirements of all the local standards from the 3GPP member countries. Regulators can then recognise the standard as a harmonised regulatory standard and type approval can be achieved globally to this standard. It was noted that it would be up to the local regulatory authorities to issue harmonised regulatory standards and as such out of the scope of 3GPP.

In the short term, the only thing that can be done in 3GPP is to develop test specifications which are a superset of the global requirements so that regional requirements can be met by conformance to the same standard. Therefore TSG SA suggested that TSG T starts to analyse the requirements in the different regulatory areas so that a specification can be produced from which each regulator can choose the subset of

requirements that meet the needs of their regulatory environment.

TSG SA asked the UMTS Forum contact person to convey the interest form the involved parties in a global approach to type approval as well as in global circulation of terminals. If any additional information or progress on the matter is found TSG SA and TSG T would be interested in being kept informed. It was reported that the UMTS Forum has a work programme, which covers these items and that this request would be taken to the UMTS Forum.

T WG1 will analyse the regulatory requirements in order to develop a superset of Test Cases for conformance testing. Each region can then select the relevant tests from the document developed by T WG1.

**TSG SA will report the discussion to the PCG and TSG T can also report the issue to the PCG.**

TSG SA noted TSG T's need for Application Identifiers (AIDs) and that TSG T recommends that 3GPP obtain an AID in its own right and it is maintained either by 3GPP or one of the Organisational Partner SDO.

**The proposal of TSG T was noted and the recommendation will be forwarded to the PCG for confirmation of the method to use.**

**Document SP-99276** "LS to TSG RAN and SA about BER or FER based performance requirements".

This Liaison from T WG1 requests that RAN and SA groups investigate whether BER or FER is better for testing MS performance. This is requested to be carried out as soon as possible and report back to T WG1.

TSG SA noted that in terms of performance requirements for the mobile most of this can be on the QoS definitions. Furthermore, it was noted that, in principle, two types of bearers exist: transparent and non-transparent bearers. Seen from a service point of view it would be reasonable to test their key performance characteristics. A transparent bearer has a constant throughput and a variable error rate, therefore it seems reasonable to test BER for transparent bearers. A non-transparent bearer (e.g. packet data) has a constant quality but a variable throughput, therefore it seems reasonable to test the FER as a kind of measure for the throughput.

It was noted that currently, RAN WG4 has taken the position that BER will be used for measurement due to test times. This caused some concerns and RAN WG4 was asked to reconsider this, taking the different types of bearers into account.

### 6.3.3 Information on status and changes to deliverables

All delegates are requested to contact the 3GPP Support team to ensure that all documents are recorded on the FTP server for the June 1999 release (Status after TSG SA meeting #4).

## 6.4 Letters to others groups

No letters were written.

## 6.5 Content of June release

**Document SP-99335** contains a draft June 1999 status list. Mr. I. Doig asked for comments from Chairmen and Rapporteurs on the correctness of the list, in order to compile a definitive list. Comments are requested by Friday 25 June 1999.

A column was requested to indicate information about specifications, which are no longer maintained, so that no work is done to update them subsequently. This was agreed.

## 6.6 Release '99

**Document SP-99327** Proposed WI (Technical Specification) on Location Services for UMTS. This was mentioned during the reporting of SA WG2.

This WI proposal is supported by Alcatel, Ericsson, Lucent, Motorola, Nokia, Nortel Networks and Siemens. This work item is part of the service requirements for Release '99 as defined by SA WG2.

The feasibility of the WI for Release '99 was questioned. It was reported that this has already been investigated in RAN WG2 and is being worked on following the service requirements.

The relationship between the work items in T1P1 and 3GPP was questioned and it was asked if the work should be done in only one body.

Substantial work has been done for 2G system and duplication of this should be avoided. However there is additional work needed and this should be taken care of in 3GPP.

With these comments, the Work Item was approved.

**Document SP-99330** Contains the draft Global Road Map for SMG and 3GPP work items, giving the status of ongoing work items. This Road Map includes both SMG and 3GPP work items. Feedback should be sent to the 3GPP Support Team (Alain Sultan).

**Document SP-99331** This classifies the work items into those which impact to GSM, those which impact the 3G system, and those which impact both.

It was noted that the handling of the common GSM and 3G work items needs to be clarified.

The document was noted. Feedback on the classification is requested, which should be sent to the 3GPP Support Team (Alain Sultan).

Access to the MCC Work Item database was requested. It was explained that this will soon be available via the web pages, as the user interface is currently being optimised for 3GPP Users.

The SA WG1 Vice Chairman requested that GSM 10.00 be made available in order to have it available for SA WG1 at their next meeting.

The document was then approved.

### 6.7 Beyond Release '99

The documents listed below were presented in series to give a full overview of the contributions before discussions began.

**Document SP-99257** "Contents and timing of the next release following Release 99", Various companies.

**Document SP-99264** "Migration from release 99 to future releases", France Telecom.

**Document SP-99263** "Service requirements for next release", France Telecom.

**Document SP-99268** "Issues for an all IP based network for R00", Siemens.

**Document SP-99283** "IP, GPRS and 3GPP Release 2000", Motorola.

**Document SP-99309** "List to be considered when defining the guidelines for R00 contents", Telia AB.

**Document SP-99218** "Liaison Statement: Proposals for the next stage of work in 3GPP (i.e. 3GPP release 2000, 2001)", ETSI EP UMTS.

**Document SP-99219** "Liaison Statement: Key Characteristics for Later Phases of UMTS", ETSI EP UMTS.

Following the presentations it was recognised that the concepts could be grouped as follows:

- The need for backward compatibility.
- Creation of 22.100 type document for recording the features of the next release.
- Targeting of next release for December 2000.
- All IP-based architecture as an option.
- Real-time services and QoS.
- Listing of items for inclusion in the next Phase.

There appears to be broad support for the all IP-based architecture option. A short feasibility study seemed to be necessary in order to plan the time-scales and implications. A concern over the delay which may be introduced by a feasibility study was voiced. It was clarified that this study would include the production of a work plan and could be completed quickly (by the next TSG SA meeting) depending on contribution from the companies.

The content proposals should be forwarded to SA WG1 in order to define the Service Requirements for the next release (e.g. Release 2000).

SA WG1 should look into the requirements of services and features before SA WG2 begin looking into the architecture requirements.

A drafting group was set up to produce a plan of action along the lines described above, using the contributions as input. The result of this drafting activity was issued in **Document SP-99334.**

**Document SP-99334** Work plan for R00. This is the output of the drafting group which recommends that:

1) a plan for R00 service requirements to be created in SA WG1:
   - a list of services/service capabilities is created and presented to TSG SA as a continuous exercise. **This was endorsed by TSG SA.**
2) a plan for R00 architecture issues to be created in SA WG2:
   - Plan and identify the necessary work to specify an "all-IP" UMTS network
   - Ensure the new (R00 and beyond) and existing (R99 and before) services/capabilities are supported by this architecture
   - Ensure an evolution plan with sufficient backward compatibility **This was endorsed by TSG SA.**
3) a list of work items is created:
   - to be maintained by the support team. **This was endorsed by TSG SA.**

   **Companies were asked to contribute to the respective groups, to allow the two plans and the list of work items to be created for 3GPP SA meeting #5. Contributions for Work Items should be sent to SA WG1 who will co-ordinate with SMG1 to ensure there are no conflicts.**

   **It was noted that these plans need to take service and evolution requirements into account.**

TSG SA confirmed that the target date for Release 2000 completion is December 2000. It was stressed that it was important that this activity not lead to a delay in the work for Release 1999.

### 6.8 Other issues

**Document SP-99332** (replaces SP-99243). “Use of the TDD mode in the paired bands”. This contribution proposes that the possibility to use TDD should explicitly be foreseen in all UMTS bands and that this provision be incorporated in the text of the specifications as appropriate.

It is the wish of TSG SA that the system will be as flexible as feasible for allocation of channel rasters and access mode (FDD/TDD), in order to be able to take future developments into account (e.g. additional Spectrum availability). Furthermore, TSG SA noted that this proposal should be dealt with in TSG RAN to determine the technical feasibility and impact (e.g. cost) of the proposal.

Interested parties are invited to contribute to TSG RAN.

## 7 Project Management

### 7.1 Review of work programme

The work programme was reviewed under agenda 6.

### 7.2 Handling of June release

Everybody was reminded that rapporteurs, etc. should forward to the 3GPP Support Team a copy of the specifications corresponding exactly to the ones referenced in the status list.

### 7.3 Working methods

**Document SP-99288** 21.900 CR 001was introduced by Mr. I. Doig of the 3GPP Support Team. It is a CR to the working methods document to align the working methods document with decisions made at TSG SA#3 meeting.

The deletion of cross-Phase compatibility aspects was questioned. This was acknowledged as an editorial error in the production of the CR.

A request for inclusion of the 3G specification numbering scheme in the document was made. This will be considered by the 3GPP Support Team for a future CR.

The CR was approved noting that the cross-Phase compatibility aspects should not be deleted from the document.

**Document SP-99289** 21.900 CR 002 was introduced by Mr. M. Pope of the 3GPP Support Team. It is a CR to the working methods document to update the software tools recommended for use in 3GPP documentation in order to reduce compatibility problems in document exchange.

The CR was approved.

**Document SP-99298** "Review of Working Procedures in 3GPP". This was provided by NTT DoCoMo and outlines 4 issues:

***Issue 1: What is the principle of 3GPP specification?***

This proposes to add the following provision in Article 2 of the 3GPP Working Procedures:

*"The evolved GSM CN should be more advanced than any existing 2G CN. For this purpose, the 3GPP CN specification should take the existing CN capabilities in any 2G systems into consideration as the evolution from GSM CN."*

***Issue 2: How a positive approach for WI creation should be taken?***

This proposes to modify Article 25 as follows:

*"TSGs and WGs shall endeavour to seek a positive direction and reach consensus on all issues,…*

***Issue 3: How the work in 3GPP and SDOs should be linked?***

This proposes to add the following provision to the draft on "out of scope of 3GPP".

*"Regional specifications produced by SDOs should be considered by 3GPP for the inclusion to 3GPP specifications. The decision shall be made by consensus or voting in TSGs"*

***Issue 4: What is the "majority" in debate?***

This requests that TSGs and WGs make decision not by "Majority-sense" but by Consensus when issues can be solved without voting.

It was noted that these proposals for modification of the 3GPP Working Procedures are a matter for the PCG. However, they were presented to TSG SA in order to allow all members of TSG SA to understand and comment on the proposals from NTT DoCoMo before they are submitted to the PCG. The Chairman stated that the contributions from all members were expected to be treated on an equal basis, technically evaluated and a decision made upon them, and that it is preferred to reach agreement by consensus on all issues, and to use Voting only as a final option.

Regional requirements should be restricted to the regulatory issues, and not to regional preferences, in order to keep the 3GPP specifications as global as possible, with minimum regional variants.

The document was then noted.

### 7.4 Other issues

**Document SP-99241** Terminology after Organisational Partners meeting. This has been dealt with under the request for delegates to check documents and identify the terminology problems.

**Document SP-99318** "The Current Situation of ARIB Specification Development Process for IMT-2000". This outlines the changes to the schedule for ARIB for Release 1999. The final Release 1999 date has not changed (December 1999). This contribution was noted as for information.

## 8 Project support

**Document SP-99266** 3GPP Support team Specification related activities report.

Mr. I. Doig, 3GPP Support Team, reported on the support activities and issues.

**Meetings:** WG meetings should not be held just before or just after a TSG meeting if Support is needed from the 3GPP Support Team. The support Team need time to prepare for TSG meetings and for the update of specifications after TSG meetings.

**Draft specifications for Releases:** Not all specifications were received for the April 1999 release, in

particular, many of the draft (pre-approval) versions were not transmitted to the Support Team for inclusion. All specifications of the versions available at the close of each TSG Plenary are required.

> **TSG Chairmen are asked to remind their WG Chairmen to avoid holding meetings just before or just after TSG meetings.**

TSGs to reconfirm the requirement for forwarding specifications to the support team after each TSG meeting.

> **Delegates are reminded that the draft specifications corresponding to the status list after each TSG SA Meeting should be forwarded to the 3GPP Support Team for inclusion in the (June 99) Release directory.**

**Latest Drafts FTP directory:** TSG SA to decide if a latest drafts FTP directory is required. This was suggested in Yokohama. This was Confirmed. Delegates are expected to forward the drafts to the Support Team.

> **A "latest drafts" directory to be created on the 3GPP FTP server, which will contain drafts updated between TSG meetings. Updated drafts need to be forwarded to the 3GPP Support Team. It should be noted that CRs should be made to the versions in the Release directories (e.g. June 1999 after this meeting) corresponding to the versions given in the status list after the latest TSG SA Meeting.**

**Document SP-99267** Proposal for 3G and SMG Specification Handling. Mr. I. Doig introduced this contribution which has been presented to TSG T and TSG RAN meetings. This proposes that common GSM and 3GPP specifications are the responsibility of one body to avoid divergence.

TSG SA was asked to approve this proposal, which will also be presented to SMG#29 for approval.

The Change Requests to pre-Release 99 GSM specifications was questioned. It was clarified that the proposal is to sub-contract the work to 3GPP as it is expected that the changes will be error corrections which would usually also need to be done on the equivalent 3G specifications within 3GPP. This would avoid divergence of specifications and improve efficiency for the Support Team and the involved experts, as the CRs will be approved by the same body.

It was clarified that the releases mentioned in the presentation refer to GSM Releases.

After these discussions the proposal was endorsed by TSG SA. It is recognised that the actual specifications to be transferred need to be reviewed and that the result of the SMG#29 decision is awaited before the proposal can be implemented.

**Document SP-99292** Report of Mobile Competence Centre activities. Mr. A. Scrase, Head of ETSI MCC, provided a report of the activities of the Mobile Competence Centre (MCC) which includes the 3GPP Support Team resources.

It was asked when the support situation in TSG RAN and it's WGs will be solved. It was explained that within the next two months there will be 2 more support team members. It is thought that another additional person is necessary. It was stressed that if the Members offer the right candidates, then the problems can be quickly fixed.

## 9 Postponed issues from earlier in the meeting

These are dealt with under their respective agenda item.

## 10 Workplan and future meetings

A summary of the future meeting dates are given below:

| TSG | No. | Date | Venue | Host |
|---|---|---|---|---|
| CN | #5 | 06-08 October 1999 | Korea | TTA |
| RAN | #5 | 06-08 October 1999 | Korea | TTA |
| T | #5 | 07-08 October 1999 | Korea | TTA |
| SA | #5 | 11-13 October 1999 | Korea | TTA |
| CN | #6 | 13-15 December 1999 | Sophia Antipolis, France | ETSI |
| RAN | #6 | 13-15 December 1999 | Sophia Antipolis, France | ETSI |
| T | #6 | 13-15 December 1999 | Sophia Antipolis, France | ETSI |
| SA | #6 | 15-17 December 1999 | Sophia Antipolis, France | ETSI |
| CN | #7 | 13-15 March 2000 | Madrid, Spain | Telefonica |
| RAN | #7 | 13-15 March 2000 | Madrid, Spain | Telefonica |
| T | #7 | 13-15 March 2000 | Madrid, Spain | Telefonica |
| SA | #7 | 15-17 March 2000 | Madrid, Spain | Telefonica |
| CN | #8 | 05-07 June 2000 | Germany (to be confirmed) | Mannesmann |
| RAN | #8 | 05-07 June 2000 | Germany (to be confirmed) | Mannesmann |
| T | #8 | 05-07 June 2000 | Germany (to be confirmed) | Mannesmann |
| SA | #8 | 07-09 June 2000 | Germany (to be confirmed) | Mannesmann |
| CN | #9 | 25-27 September 2000 | | |
| RAN | #9 | 25-27 September 2000 | **Host required** | |
| T | #9 | 25-27 September 2000 | | |
| SA | #9 | 27-29 September 2000 | | |
| CN | #10 | 11-13 December 2000 | | |
| RAN | #10 | 11-13 December 2000 | **Host required** | |
| T | #10 | 11-13 December 2000 | | |
| SA | #10 | 13-15 December 2000 | | |

## 11 Any other business

**Document SP-99282** describing the meeting LAN and how to use it was noted. In addition it was noted that the LAN system seemed to work well and the providers of the equipment were thanked for their support of this.

Use of LAN – there was some concern that delegates will not be permitted to connect to a LAN unless an adequate security level can be provided. This requires investigation. With help of the efficiency for document distribution provided with the LAN a first reply to this concern was provided in **Document SP-99338**.

**Document SP-99258** containing a press release about the 3G-IP was noted for information.

**Document SP-99338** contains a response to the security question on LAN use. The document was noted for information.

**Document SP-99323** is a press release from the UMTS Forum on 3G Harmonisation and is presented for information. The document was noted.

**Document SP-99326** is a press release from the GSM Alliance on the growth of GSM Customer base in North America. The document was noted.

## 12 Closing of meeting

The Chairman thanked the delegates for their patience and hard work. The hosts were thanked for the excellent facilities and the Support Team for their hard work in the smooth running of the meeting.

# Annex A: Co-ordinates of TSG and WG Officials

| Position | Name | Company | e-mail | Telephone | Fax | (Mobile Tel.) |
|---|---|---|---|---|---|---|
| **TSG SA Officials:** | | | | | | |
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| Vice Chairman | Gary Jones | Omnipoint | gjones@omnipoint-corp.com | +1 301 951 2524 | +1 703 715 2365 | +1 201486 0949 |
| Vice Chairman | Armin Toepfer | Mannesmann | armin.toepfer@d2privat.de | +49 211 533 2838 | +49 211 533 2804 | +49 172 2100 748 |
| Secretary | Maurice Pope | 3GPP Support Team | maurice.pope@etsi.fr | +33 4 92 94 4259 | +33 4 92 38 5259 | |
| **TSG SA WG1 Officials:** | | | | | | |
| Chairman | Alan Cox | Vodafone | alan.cox@vf.vodafone.co.uk | +44 1635 673 332 | +44 1635 583 019 | +44 385 200 147 |
| Vice Chairman | David Cooper | Telecom Modus Ltd | david.cooper@t-modus.co.uk | | | |
| Vice Chairman | Tommi Kokkola | Nokia Corporation | tommi.kokkola@ntc.nokia.com | +358 40 50 40 734 | +358 9 511 68080 | +358 40 50 40 734 |
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| **TSG SA WG2 Officials:** | | | | | | |
| Chairman | Teuvo Jarvela | Nokia Corporation | teuvo.jarvela@nmp.nokia.com | +44 1252 865 163 | +44 1252 865 065 | +44 385 525 683 |
| Vice Chairman | Yukio Hiramatsu | NTT | hiramatu@magnet.netlab.ntt.co.jp | +81 422 59 6024 | +81 422 60 7429 | +81 50 137 8536 |
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| Secretary | Alain Sultan | 3GPP Support Team | alain.sultan@etsi.fr | +33 4 92 94 42 71 | +33 4 92 38 5271 | +33 6 80 08 94 59 |
| **TSG SA WG3 Officials:** | | | | | | |
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| Vice Chairman | Stefan Puetz | Deutsche Telekom MobilNet | stefan.puetz@t-mobil.de | +49 228 936 3377 | +49 228 936 88 3377 | |
| Vice Chairman | Adam Barenzweig | Lucent Technologies | madadam@lucent.com | | | |
| Secretary | Ansger Bergmann | 3GPP Support Team | ansgar.bergmann@etsi.fr | +33 4 92 94 43 22 | +33 4 92 38 5322 | |
| **TSG SA WG4 Officials:** | | | | | | |
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| Vice Chairman | Kari Jarvinen | Nokia | kari.jarvinen@research.nokia.com | +358 3272 5854 | +358 3272 5888 | +358 50 555 0999 |
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| Secretary | Paolo Usai | 3GPP Support Team | paolo.usai@etsi.fr | +33 4 92 94 42 36 | +33 4 92 38 5236 | +39 335 387 164 |
| **TSG SA WG5 Officials:** | | | | | | |
| Chairman | Albert Yuhan | Omnipoint | ayuhan@omnipoint-pcs.com | +1 973 872 5791 | +1 973 872 5714 | |
| Vice Chairman | Michael Truss | Motorola | trussm@cork.cig.mot.com | +353 21 511 327 | +353 21 357 635 | |
| Vice Chairman | Vacancy | | | | | |
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## Annex B: List of documents

| Number | Title | Source | Agenda item | Replaced by Tdoc |
|---|---|---|---|---|
| SP-99214 | Draft agenda for Meeting #4 | Chairman | 2 | SP-99259 |
| SP-99215 | Draft Report of TSG SA Meeting #3, version 0.0.5 | TSG SA Secretary | 3 | |
| SP-99216 | ETSI liaison point for UMTS naming and addressing matters | ETSI TC NA | 4.2 | |
| SP-99217 | Questions ITU-R 39/8 and 77/8 | RAN ITU Ad Hoc contact person | 4.1 | |
| SP-99218 | Liaison Statement: Proposals for the next stage of work in 3GPP (i.e. 3GPP release 2000, 2001) | ETSI EP UMTS | 6.7 | |
| SP-99219 | Liaison Statement: Key Characteristics for Later Phases of UMTS | ETSI EP UMTS | 4.2 | |
| SP-99220 | Liaison Statement: Activities in EP UMTS | ETSI EP UMTS | 4.2 | |
| SP-99221 | Comments on “Liaison Statement on the requirement for Active Location Retrieval in CAMEL Phase 3” | T1P1 | 4.2 | |
| SP-99222 | Response to the TSG-SA LS on the usage of GSM-only SIM Cards for 3G access | ETSI SMG2 | 4.2 | |
| SP-99223 | Liaison statement concerning EDGE phase II | ETSI SMG2 | 4.2 | |
| SP-99224 | Report from SA WG1 to SA Plenary #4 | SA WG1 | 5.1.1 | |
| SP-99225 | CR Addressing introduced in 22.101 from 22.975 | SA WG1 | 5.1.3 | |
| SP-99226 | CRs on Emergency Service applied to 3G 22.100 and 3G 22.101 | SA WG1 | 5.1.3 | |
| SP-99227 | CR on FAX requirement affecting 3G 22.100 | SA WG1 | 5.1.3 | |
| SP-99228 | CR on User control of target network preference for handover affecting 3G 22.129 | SA WG1 | 5.1.3 | |
| SP-99229 | CRs on Numbereing Scheme affecting 3G 22.101 and 3G 22.100 | SA WG1 | 5.1.3 | |
| SP-99230 | CRs on QoS introduction to 3G 22.105 | SA WG1 | 5.1.3 | SP-99324 |
| SP-99231 | CR on Re-negotiation during call / session affecting 3G TS 22.100 | SA WG1 | 5.1.3 | |
| SP-99232 | CR on Relationship between UMTS 22.100 and other 22. xx document series | SA WG1 | 5.1.3 | |
| SP-99233 | CR on Security requirements for 3G Phase 1 R99 | SA WG1 | 5.1.3 | |
| SP-99234 | CR on SMS requirements for Release 99 | SA WG1 | 5.1.3 | |
| SP-99235 | CR on 22.907 – Report not to be maintained | SA WG1 | 5.1.3 | |
| SP-99236 | Reserved for SA WG1 | SA WG1 | 5.1.3 | |
| SP-99237 | 3G TS 22.121 v 2.0.0 (Virtual Home Environment - VHE) | SA WG1 | 5.1.3 | |
| SP-99238 | LS Work transfer from SMG1 to 3GPP | SA WG1 | 5.1.3 | |
| SP-99239 | LS from SERG on Emergency calls (S1-99089) | SA WG1 | 5.1.3 | |
| SP-99240 | LS from SERG (s1-99090) | SA WG1 | 5.1.3 | |
| SP-99241 | Revised Terms of Reference and consistency of terminology across TSGs | SA Secretary | 7.4 | |
| SP-99242 | Dual mode USIM | Bouygues Telecom | 6.8 | |
| SP-99243 | use of the TDD mode in the paired bands | Bouygues Telecom | 6.8 | SP-99332 |
| SP-99244 | 3G TS 26.071 V2.0.0 | SA WG4 | 5.4.3 | |
| SP-99245 | 3G TS 26.090 V2.0.0 | SA WG4 | 5.4.3 | |
| SP-99246 | 3G TS 26.091 V2.0.0 | SA WG4 | 5.4.3 | |
| SP-99247 | 3G TS 26.092 V2.0.0 | SA WG4 | 5.4.3 | |
| SP-99248 | 3G TS 26.093 V2.0.0 | SA WG4 | 5.4.3 | |
| SP-99249 | 3G TS 26.110 V2.0.0 | SA WG4 | 5.4.3 | |
| SP-99250 | 3G TS 26.111 V2.0.0 | SA WG4 | 5.4.3 | |
| SP-99251 | 3G TR 26.911 v 2.0.0 | SA WG4 | 5.4.3 | |
| SP-99252 | 3G TS 26.074 V 1.0.0 | SA WG4 | 5.4.3 | |
| SP-99253 | 3G TS 26.101 V 1.2.0 | SA WG4 | 5.4.3 | |
| SP-99254 | 3G TR 26.912 V1.0.0 | SA WG4 | 5.4.3 | |

| Number | Title | Source | Agenda item | Replaced by Tdoc |
|---|---|---|---|---|
| SP-99255 | Liaison from SA WG4 to TSG SA - "Transfer" of AMR Specifications | SA WG4 | 5.4.3 | |
| SP-99256 | Liaison from SA WG4 to TSG SA - AMR 3G Characterization Funding | SA WG4 | 5.4.3 | |
| SP-99257 | Contents and timing of the next release following release 99 | AT&T, BT, BTCellnet, Ericsson, Intel, Lucent, Motorola, Nokia, Nortel Networks, Siemens, Telenor, TIM/CSELT | 6.7 | |
| SP-99258 | Formation of 3G.IP Focus Group | BT | 7 | |
| SP-99259 | Revised Draft agenda for Meeting #4 | Chairman | 2 | |
| SP-99260 | Status report of SA WG4 | SA4 Chairman | 5.4.1 | |
| SP-99261 | Reserved for Airtouch | Airtouch | | |
| SP-99262 | 23.930 version 2.0.0 - Iu Principles | SA WG2 | 5.2.3 | |
| SP-99263 | Service requirements for next release | France Telecom | 6.6 | |
| SP-99264 | Migration from release 99 to future releases | France Telecom | 6.7 | |
| SP-99265 | Inclusion of the new security mechanisms in Release 99 | France Telecom | 6.6 | |
| SP-99266 | 3GPP Support team Specification related activities report | I Doig, 3GPP Support | 8 | |
| SP-99267 | Proposal for 3G and SMG Specification Handling | I Doig, 3GPP Support | 7.2 | |
| SP-99268 | Issues for an all IP based network for R00 | Siemens | 6.8 | |
| SP-99269 | Optimal Routing | BT, NTT DoCoMo, T-Mobil | 6.1.2 | |
| SP-99270 | WITHDRAWN | | | |
| SP-99271 | A new work item proposal for 3G charging management | SA WG5 | 5.5.2 | |
| SP-99272 | A new work item proposal for 3G system fault management | SA WG5 | 5.5.2 | |
| SP-99273 | A new work item proposal for 3G system configuration management | SA WG5 | 5.5.2 | |
| SP-99274 | A new work item proposal for 3G system performance management | SA WG5 | 5.5.2 | |
| SP-99275 | Terminal/SIM management as a potential new O&M feature in 3G | SA WG5 | 5.5.2 | |
| SP-99276 | LS to TSG RAN and SA about BER or FER based performance requirements | TSG T WG1 Chairman | 4.1 | |
| SP-99277 | Request for funding of USIM testing | TSG T | 6.3.2 | |
| SP-99278 | Funding for development of 3GPP TTCN specifications | TSG T | 6.3.2 | |
| SP-99279 | Request for guidance on Harmonised Regulatory Standards for 3GPP Terminals | TSG T | 6.3.2 | |
| SP-99280 | Report of TSG T to TSG SA (presentation slides) | TSG T Chairman | 6.3.1 | |
| SP-99281 | Report of TSG T to TSG SA | TSG T Chairman | 6.3.1 | |
| SP-99282 | LAN facility during TSGS#4 and SMG#29 | TSG-T2 Chairman | For Info | |
| SP-99283 | IP, GPRS and 3GPP Release 2000 | Motorola | 6.7 | |
| SP-99284 | Status of 3GPP security deliverables and priorities of work items | SA WG3 | 5.3.1 | |
| SP-99285 | GSM Association Report | GSM Association | 4.2 | |
| SP-99286 | LS from TADIG on CDRs | TADIG/ GSM Assoc. | 4.2 | |
| SP-99287 | LS from SERG on SIM compatibility | SERG/GSM Assoc. | 4.2 | |
| SP-99288 | CR 001 to 3G TR 21.900 version 3.0.0 | 3GPP Support Team | 8 | |
| SP-99289 | CR 002 to 3G TR 21.900 version 3.0.0 | 3GPP Support Team | 8 | |
| SP-99290 | TS 23.121 version 2.0.0 | SA WG2 | 5.2.3 | |
| SP-99291 | TR 23.920 version 2.0.0 | SA WG2 | 5.2.3 | |
| SP-99292 | Report of Mobile Competence Centre activities | Adrian Scrase (MCC) | 8 | |

| Number | Title | Source | Agenda item | Replaced by Tdoc |
|---|---|---|---|---|
| SP-99293 | Report to SA Meeting # 4, Miami, USA 21-23 June 1999 | Chairman 3GPP TSG-SA WG3 | 5.3.1 | |
| SP-99294 | 3G TS 33.106 V1.0.0 (Tdoc S3-99204) | TSG SA WG3 | 5.3.3 | |
| SP-99295 | 3G TR 33.901 V1.0.0 (Tdoc S3-99200) | TSG SA WG3 | 5.3.3 | |
| SP-99296 | 3G TS 33.105 V1.0.0 (Tdoc S3-99201) | TSG SA WG3 | 5.3.3 | |
| SP-99297 | 3G TS 33.103 V1.0.0 (Tdoc S3 99-202) | TSG SA WG3 | 5.3.3 | |
| SP-99298 | Review of Working Procedures in 3GP | NTTDoCoMo | 7.3 | |
| SP-99299 | reserved AS | | | |
| SP-99300 | 3G TR 23.110 v.3.1.0 | TSG SA WG2 | 5.2.3 | |
| SP-99301 | 3G TR 23.907 v.1.1.0 | TSG SA WG2 | 5.2.3 | SP-99322 |
| SP-99302 | 3G TR 23.923 v.0.6.0 | TSG SA WG2 | 5.2.3 | |
| SP-99303 | 3G TR 23.925 v.0.2.0 | TSG SA WG2 | 5.2.3 | |
| SP-99304 | 3G TR 23.927 v.0.1.0 | TSG SA WG2 | 5.2.3 | |
| SP-99305 | TSG-S2 Status Report at TSG-S Meeting | TSG SA WG2 | 5.2.1 | SP-99328 |
| SP-99306 | Transfer of Stage 2 Specifications from GSM towards UMTS | TSG SA WG2 | | |
| SP-99307 | reserved AS | TSG SA WG2 | | |
| SP-99308 | Change requests to 3G TS 33.102 (Tdoc S3 99-203) | TSG SA WG3 | | |
| SP-99309 | List to be considered when defining the guidelines for R00 contents | Telia AB | | |
| SP-99310 | TSG-SA WG5 (Telecom Management) Report Summary of WG Meetings | TSG-SA WG5 Chair | 5.5.1 | |
| SP-99311 | Arguments for keeping VHE in release ´99 | Telia | | |
| SP-99312 | Liaison to SA on the ITU-R TG8/1 revision of Recommendation M.1079 | ITU Ad Hoc Contact Person | | |
| SP-99313 | Chairmans Report from TSG RAN | TSG RAN Chairman | 6.2.1 | |
| SP-99314 | Chairmans Report from TSG RAN (Powerpoint Presentation) | TSG RAN Chairman | 6.2.1 | |
| SP-99315 | Technical discussion Materials related to OHG Proposals | TSG RAN | 6.1.2 | |
| SP-99316 | Plan to handle the OHG Harmonisation proposals in 3GPP | TSG RAN | | |
| SP-99317 | Service Requirements for Security in UM | SERG - GSM Association | | |
| SP-99318 | The Current Situation of ARIB Specification Development Process for IMT-200 | ARIB | | |
| SP-99319 | Proposal for MM services within UMTS | CSELT, TIM, BT, T-Mobil | 5.4.2 | |
| SP-99320 | Status report of SMG3/TSG_CN | TSG-CN Chairman | 6.1.1 | |
| SP-99321 | TSG_CN report to TSG_SA#4 - Presentation | TSG-CN Chairman | 6.1.1 | |
| SP-99322 | 3G TR 23.907 v.1.1.0 (Revision of SP-99301) | TSG SA WG2 | 5.2.3 | |
| SP-99323 | 3G Harmonization | UMTS Forum 3GPP CG Chairperson | | |
| SP-99324 | (Revised) CRs on QoS introduction to 3G 22.105 | SA WG1 | 5.1.3 | |
| SP-99325 | Cooperation with ITU-T | TSG-N Vice Chairman (ITU-S SG11 Q.23 rapporteur) | | |
| SP-99326 | GSM Adds More Than 600,000 Customers in First Quarter Total Reaches 3.6 Million in United States & Canada | GSM Alliance News | | |
| SP-99327 | Proposed Work Item on Location Services for UMTS | Alcatel, Ericsson, Lucent, Motorola, Nokia, Nortel Networks, Siemens | 5.2 | |
| SP-99328 | TSG-S2 Status Report at TSG-S Meeting (Revised SP-99305) | TSG SA WG2 | 5.2.1 | |

| Number | Title | Source | Agenda item | Replaced by Tdoc |
|---|---|---|---|---|
| SP-99329 | Technical Project Co-ordination within S2 and 3GPP | TSG SA WG2 | 5.2.1 | |
| SP-99330 | Global Roadmap for SMG and SA Plenary WIs | MCC | 7 | |
| SP-99331 | Proposal of classification of the release 99 Wis | MCC | 7 | |
| SP-99332 | use of the TDD mode in the paired bands (Revision of SP-99243) | Bouygues Telecom | 6.8 | |
| SP-99333 | Template for Endorsement of Referencing of 3GPP specs by ITU | Ericsson, Fujitsu, NEC, Nokia, NTT DoCoMo, Omnipoint | 6.6 | |
| SP-99334 | Work Plan for Release 2000 | SA WG2 Chairman | | |
| SP-99335 | June 1999 Status List | 3GPP Support Team | | |
| SP-99336 | System Architecture Issues identified to be solved urgently within TSG-S2 | TSG SA Drafting Group | | |
| SP-99337 | | | | |
| SP-99338 | An initial analysis of security considerations for electronic meetings | TSG-T2 Chairman | | |
| SP-99339 | Press information | UMTS Forum 3GPP CG Chairperson | | |

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## Annex D: Status list of Specifications and Reports after TSG SA Meeting #4 ("June Release")

| Number | Ver at TSG#4 | Title | planned V3 | Frozen @ | TSG/ WG | Editor | Comment |
|---|---|---|---|---|---|---|---|
| 21.111 | 3.0.0 | USIM and IC card requirements | April 99 | | T3 | Günter Maringer | |
| 21.133 | 3.0.0 | Security Threats and Requirements | April 99 | | S3 | Per Christoffersson | |
| 21.904 | 0.0.3 | Terminal Capability Requirements | Dec 99 | | T2 | Craig Bishop | |
| 21.906 | 3.0.0 | O&M requirements | April 99 | | S1 | | |
| 22.053 | 0.1.1 | Tandem Free Operation of speech codecs; Stage 1 service description | Dec 99 | | S4 | William Navarro | |
| 22.100 | 3.3.0 | UMTS Phase 1 | April 99 | | S1 | Jean-Paul Gallaire | CR at TSG#4 |
| 22.101 | 3.6.0 | UMTS Service principles | April 99 | | S1 | Paul Dwyer | CR at TSG#4 |
| 22.105 | 3.5.0 | Services & Service capabilities | April 99 | | S1 | Wayne Ashwell | CR at TSG#4 |
| 22.115 | 3.1.0 | Service Aspects Charging and billing | April 99 | | S1 | Emanuele Montegrosso | |
| 22.121 | 3.0.0 | Provision of Services in UMTS - The Virtual Home Environment | Oct 99 | | S1 | Jumoke Ogunbekum | |
| 22.129 | 3.0.0 | Handover Requirements between UMTS and GSM or other Radio Systems | April 99 | | S1 | David Cooper | |
| 22.135 | 1.0.0 | Multicall Stage1 | June 99 | | S1 | Tommi Kokkola | |
| 22.907 | 3.1.3 | Terminal concepts | April 99 | | S1 | Mika Tolvanen | CR at TSG#4 Not maintained |
| 22.924 | 3.1.1 | Charging and accounting mechanisms | April 99 | | S1 | Emanuele Montegrosso | |
| 22.925 | 3.1.1 | Quality of service and network performance | April 99 | | S1 | Olle Eriksson | |
| 22.945 | 1.0.0 | Study of provision of fax service in GSM and UMTS | Oct 99 | | T2 | Eric Colban | |
| 22.960 | 3.0.1 | Mobile multimedia services | April 99 | | S1 | Thomas Ahnberg | |
| 22.970 | 3.0.1 | Virtual Home Environment Report | April 99 | | S1 | Jumoke Ogunbekum | |
| 22.971 | 3.1.1 | Automatic establishment of roaming relationships | April 99 | | S1 | Emanuele Montegrosso | |
| 22.972 | 0.0.0 | Multimedia | Dec 99 | | S1 | | |
| 22.975 | 3.0.1 | Advanced addressing | April 99 | | S1 | Stephan Kleier | |
| 23.003 | 3.1.0 | Numbering, Addressing and Identification | April 99 | | N1/2 | | CR at TSG#4 |
| 23.007 | 3.1.0 | Restoration procedures | April 99 | | N2B | | CR at TSG#4 |
| 23.008 | 3.0.0 | Organisation of subscriber data | April 99 | | N2B | | |
| 23.009 | 3.0.0 | Handover procedures | April 99 | | N2B | | |
| 23.010 | 3.0.0 | Public Land Mobile Network (PLMN) Connection Types | April 99 | | N3 | | |
| 23.011 | 3.0.0 | Technical Realization of Supplementary Services - General Aspects | April 99 | | NSS | | |
| 23.012 | 3.0.0 | Location registration procedures | April 99 | | N1 | | |
| 23.014 | 3.0.0 | Support of Dual Tone Multi Frequency (DTMF) signalling | April 99 | | N1 | | |
| 23.015 | 3.1.0 | Technical realisation of Operator Determined Barring (ODB) | April 99 | | N2B | | CR at TSG#4 |
| 23.016 | 3.1.0 | Subscriber data management - Stage 2 | April 99 | | N2B | | CR at TSG#4 |

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| 23.018 | 3.1.0 | Basic Call Handling - Technical realisation | April 99 | | N2B | | CR at TSG#4 |
| 23.022 | 3.1.0 | Functions related to Mobile Station (MS) in idle mode | April 99 | | N1 | | CR at TSG#4 |
| 23.032 | 3.0.0 | Universal Geographical Area Description (GAD) | April 99 | | N1 | | |
| 23.034 | 3.0.0 | High Speed Circuit Switched Data (HSCSD) - Stage 2 | April 99 | | N1 | | |
| 23.038 | 3.1.0 | Alphabets & Language | June 99 | | T2 | Arthur Gidlow | CR at TSG#4 |
| 23.039 | 3.0.0 | Interface Protocols for the Connection of Short Message Service Centers (SMSCs) to Short Message Entities (SMEs) | June 99 | | T2 | Arthur Gidlow | |
| 23.040 | 3.1.0 | Technical realisation of SMS Point to Point | June 99 | | T2 | Arthur Gidlow | CR at TSG#4 |
| 23.042 | 3.0.0 | Compression algorithm for SMS | June 99 | | T2 | Arthur Gidlow | |
| 23.043 | 3.0.0 | Support of Videotext | April 99 | | N3 | | |
| 23.044 | 3.0.0 | Support of Teletext in a Public Land Mobile Network (PLMN) | April 99 | | N3 | | |
| 23.045 | 3.0.0 | Technical realisation of facsimile Group 3 service- transparent | April 99 | | N3 | | |
| 23.046 | 3.0.0 | Technical realisation of facsimile Group 3 service- non-transparent | April 99 | | N3 | | |
| 23.054 | 3.0.0 | Shared Interworking Functions - Stage 2 | April 99 | | N3 | | |
| 23.057 | 1.1.0 | Mobile Station Application Execution Environment (MExE); Functional description; Stage 2 | Oct 99 | | T2 | Mark Cataldo | |
| 23.067 | 3.0.0 | Enhanced Multi-Level Precedence and Preemption Service (EMLPP) - Stage 2 | April 99 | | NSS | | |
| 23.068 | 3.0.0 | Voice Group Call Service (VGCS) - Stage 2 | April 99 | | N1/2B | | |
| 23.069 | 3.0.0 | Voice Broadcast service (VBS) - Stage 2 | April 99 | | N1 | | |
| 23.070 | 3.0.0 | Routing of calls to/from Public Data Networks | April 99 | | N3 | | |
| 23.072 | 3.0.0 | Call Deflection Supplementary Service - Stage 2 | April 99 | | NSS | | |
| 23.078 | 3.1.0 | CAMEL Stage 2 | April 99 | | N2A | | CR at TSG#4 |
| 23.079 | 3.1.0 | Support of optical routeing - Phase 1 - Stage 2 | April 99 | | N2A | | CR at TSG#4 |
| 23.081 | 3.0.0 | Line Identification Supplementary Services - Stage 2 | April 99 | | NSS | | |
| 23.082 | 3.0.0 | Call Forwarding (CF) Supplementary Services - Stage 2 | April 99 | | NSS | | |
| 23.083 | 3.0.0 | Call Waiting (CW) and Call Hold (HOLD) Supplementary Service - Stage 2 | April 99 | | NSS | | |
| 23.084 | 3.0.0 | MultiParty (MPTY) Supplementary Service - Stage 2 | April 99 | | NSS | | |
| 23.085 | 3.0.0 | Closed User Group (CUG) Supplementary Service - Stage 2 | April 99 | | NSS | | |
| 23.086 | 3.0.0 | Advice of Charge (AoC) Supplementary Service - Stage 2 | April 99 | | NSS | | |
| 23.087 | 3.0.0 | User-to-User Signalling (UUS) - Stage 2 | April 99 | | NSS | | |
| 23.088 | 3.0.0 | Call Barring (CB) Supplementary Service - Stage 2 | April 99 | | NSS | | |
| 23.090 | 3.0.0 | Unstructured Supplementary Service Data (USSD) - Stage 2 | April 99 | | NSS | | |
| 23.091 | 3.0.0 | Explicit Call Transfer (ECT) Supplementary Service - Stage 2 | April 99 | | NSS | | |
| 23.093 | 3.0.0 | Call Completion to Busy Subscriber (CCBS) - Stage 2 | April 99 | | NSS | | |
| 23.096 | 3.0.0 | Name Identification Supplementary Service - Stage 2 | April 99 | | NSS | | |

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| 23.101 | 3.0.1 | General UMTS Architecture | June 99 | | S2 | Magnus Olsson | |
| 23.110 | 3.1.0 | UMTS Access Stratum; Services and Functions | June 99 | | S2 | Oscar Lopez – Torres | |
| 23.121 | 3.0.0 | Architecture Requirements for release 99 | June 99 | | S2 | André Jarvis | |
| 23.907 | 1.1.0 | Quality of Service | Oct 99 | | S2 | uha Kalliokulju | |
| 23.908 | 3.0.0 | Technical report on Pre-Paging | June 99 | | N2 | | |
| 23.909 | 3.0.0 | Technical report on the Gateway Location Register | June 99 | | N2 | | |
| 23.920 | 3.0.0 | Evolution of the GSM platform towards UMTS | June 99 | | S2 | André Jarvis | |
| 23.923 | 0.6.0 | Combined GSM and Mobile IP mobility handling in UMTS IP CN | Dec 99 | | S2 | Elisabeth Hubbard | |
| 23.925 | 0.2.0 | UMTS Core network based ATM transport | Dec 99 | | S2 | Adel Rouz | |
| 23.927 | 0.1.0 | VHE, Open Service Architecture | Dec 99 | | S1 | | |
| 23.930 | 3.0.0 | Iu Principles | June 99 | | S2 | Bo Axerud | |
| 23.960 | 0.1.0 | Framework of Network functions to support multimedia services in UMTS | Dec 99 | | S2 | Axel Gabe | |
| 23.x08 | 3.0.0 | Mobile Radio Interface Layer 3 specification stage 2 (structured procedures) | June 99 | | N2B | | Ch 7 of 04.08 |
| 24.008 | 3.0.0 | Mobile Radio Interface Layer 3 specification (CC/MM/SM) | April 99 | | N1 | | |
| 24.010 | 3.0.0 | Mobile Radio Interface Layer 3 - Supplementary Services Specification - General Aspects | April 99 | | N3 | | |
| 24.022 | 3.0.0 | Radio Link Protocol (RLP) for Data and Telematic Services on the (MS-BSS) Interface and the Base Station System - Mobile-services Switching Centre (BSS-MSC) Interface | April 99 | | N3 | | |
| 24.065 | 3.1.0 | Mobile Station (MS) - Serving GPRS Support Node (SGSN); Subnetwork Dependent Convergence Protocol (SNDCP) | April 99 | | N1 | | CR at TSG#4 |
| 24.067 | 3.0.0 | Enhanced Multi-Level Precedence and Pre-emption service (eMLPP) - Stage 3 | April 99 | | NSS | | |
| 24.068 | 3.1.0 | Group Call Control (GCC) Protocol | April 99 | | N1 | | CR at TSG#4 |
| 24.069 | 3.1.0 | Broadcast Call Control (BCC) Protocol - Stage 3 | April 99 | | N1 | | CR at TSG#4 |
| 24.072 | 3.0.0 | Call Deflection Supplementary Service - Stage 3 | April 99 | | NSS | | |
| 24.080 | 3.0.0 | Mobile radio Layer 3 Supplementary Service specification - Formats and coding | April 99 | | NSS | | |
| 24.081 | 3.0.0 | Line Identification Supplementary Service - Stage 3 | April 99 | | NSS | | |
| 24.082 | 3.0.0 | Call Forwarding Supplementary Service - Stage 3 | April 99 | | NSS | | |
| 24.083 | 3.0.0 | Call Waiting (CW) and Call Hold (HOLD) Supplementary Service - Stage 3 | April 99 | | NSS | | |
| 24.084 | 3.0.0 | MultiParty (MPTY) Supplementary Service - Stage 3 | April 99 | | NSS | | |
| 24.085 | 3.0.0 | Closed User Group (CUG) Supplementary Service - Stage 3 | April 99 | | NSS | | |
| 24.086 | 3.0.0 | Advice of Charge (AoC) Supplementary Service - Stage 3 | April 99 | | NSS | | |
| 24.087 | 3.0.0 | User-to-User Signalling (UUS) - Stage 3 | April 99 | | NSS | | |

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| 24.088 | 3.0.0 | Call Barring (CB) Supplementary Service - Stage 3 | April 99 | | NSS | | |
| 24.090 | 3.0.0 | Unstructured Supplementary Service Data (USSD) - Stage 3 | April 99 | | NSS | | |
| 24.091 | 3.0.0 | Explicit Call Transfer (ECT) Supllementary Service - Stage 3 | April 99 | | NSS | | |
| 24.093 | 3.0.0 | Call Completion to Busy Subscriber (CCBS) - Stage 3 | April 99 | | NSS | | |
| 24.096 | 3.0.0 | Name Identification Supplementary Service - Stage 3 | April 99 | | NSS | | |
| 25.101 | 2.0.0 | UE Radio transmission and reception (FDD) | Oct 99 | | R4 | Edgar Fernandes | |
| 25.102 | 1.1.0 | UE Radio transmission and reception (TDD) | Oct 99 | | R4 | Meik Kottkamp | |
| 25.103 | 1.0.0 | RF parameters in support of RRM | Oct 99 | | R4 | Daniele Franceschini | |
| 25.104 | 2.0.0 | BTS Radio transmission and reception (FDD) | Oct 99 | | R4 | Johan Sköld | |
| 25.105 | 1.1.0 | BTS Radio transmission and reception (TDD) | Oct 99 | | R4 | Meik Kottkamp | |
| 25.113 | 0.0.0 | BTS EMC | Oct 99 | | R4 | Simon Pike | |
| 25.141 | 1.0.0 | Base station conformance testing (FDD) | Dec 99 | | R4 | Howard Benn | |
| 25.142 | 0.0.1 | Base station conformance testing (TDD) | Dec 99 | | R4 | Howard Benn | |
| 25.201 | 2.1.0 | Physical layer -General Description | Oct 99 | | R1 | Antti Toskala | |
| 25.211 | 2.1.0 | Physical channels and mapping of transport channels onto physical channels (FDD) | Oct 99 | | R1 | | |
| 25.212 | 2.0.0 | Multiplexing and channel coding (FDD) | Oct 99 | | R1 | | |
| 25.213 | 2.1.0 | Spreading and modulation (FDD) | Oct 99 | | R1 | | |
| 25.214 | 1.1.0 | FDD; physical layer procedures | Oct 99 | | R1 | | |
| 25.221 | 1.1.0 | Physical channels and mapping of transport channels onto physical channels (TDD) | Oct 99 | | R1 | | |
| 25.222 | 2.0.0 | Multiplexing and channel coding (TDD) | Oct 99 | | R1 | | |
| 25.223 | 2.1.0 | Spreading and modulation (TDD) | Oct 99 | | R1 | | |
| 25.224 | 1.0.0 | TDD; physical layer procedures | Oct 99 | | R1 | | |
| 25.231 | 0.3.0 | Physical layer; measurements | Oct 99 | | R1 | | |
| 25.301 | 3.1.0 | Radio Interface Protocol Architecture | April 99 | | R2 | Wolfgang Granzow | CR at TSG#4 |
| 25.302 | 2.3.0 | Services provided by the physical layer | Oct 99 | | R2 | Pierre Lescuyer | |
| 25.303 | 3.0.0 | UE functions and inter-layer procedures in connected mode | June 99 | | R2 | Mikko J.Rinne | |
| 25.304 | 1.2.0 | UE procedures in Idle Mode | Oct 99 | | R2 | Tommi Leivonen | |
| 25.321 | 3.0.0 | Medium Access Control (MAC) Protocol Specification | June 99 | | R2 | Armin Sitte | |
| 25.322 | 1.1.0 | Radio Link Control (RLC) Protocol Specification | Oct 99 | | R2 | Daniele Franceschini | |
| 25.331 | 1.1.0 | Radio Resource Control (RRC) Protocol Specification | Oct 99 | | R2 | Stephen Barrett | |
| 25.401 | 1.1.1 | UTRAN Overall Description | Oct 99 | | R3 | Jean-Marie Calmel | |
| 25.410 | 0.2.1 | UTRAN Iu Interface: General Aspects and Principles | Oct 99 | | R3 | Richard Townend | |
| 25.411 | 3.0.0 | UTRAN Iu interface Layer 1 | June 99 | | R3 | Achim Brandt | |
| 25.412 | 3.0.0 | UTRAN Iu interface signalling transport | June 99 | | R3 | Kiran Thakare | |

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| 25.413 | 1.0.2 | UTRAN Iu interface RANAP signalling | Dec 99 | | R3 | Jyrki Jussila | |
| 25.414 | 3.0.0 | UTRAN Iu interface data transport & transport signalling | June 99 | | R3 | David Comstock | |
| 25.415 | 0.1.3 | UTRAN Iu interface user plane protocols | Oct 99 | | R3 | Alain Maupin | |
| 25.420 | 0.1.3 | UTRAN Iur Interface: General Aspects and Principles | Oct 99 | | R3 | Kevin Hegerty | |
| 25.421 | 3.0.0 | UTRAN Iur interface Layer 1 | June 99 | | R3 | Achim Brandt | |
| 25.422 | 3.0.0 | UTRAN Iur interface signalling transport | June 99 | | R3 | Kiran Thakare | |
| 25.423 | 1.1.1 | UTRAN Iur interface RNSAP signalling | Dec 99 | | R3 | Göran Rune | |
| 25.424 | 3.0.0 | UTRAN Iur interface data transport & transport signalling for CCH data streams | June 99 | | R3 | Nicolas Drevon | |
| 25.425 | 0.2.0 | UTRAN Iur interface user plane protocols for CCH data streams | Oct 99 | | R3 | Nicolas Drevon | |
| 25.426 | 3.0.0 | UTRAN Iur and Iub interface data transport & transport signalling for DCH data streams | June 99 | | R3 | Sami Kekki | |
| 25.427 | 0.2.1 | UTRAN Iur and Iub interface user plane protocols for DCH data streams | Oct 99 | | R3 | Fabio Longoni | |
| 25.430 | 0.1.2 | UTRAN Iub Interface: General Aspects and Principles | Oct 99 | | R3 | Mick Wilson | |
| 25.431 | 3.0.0 | UTRAN Iub interface Layer 1 | June 99 | | R3 | Achim Brandt | |
| 25.432 | 3.0.0 | UTRAN Iub interface signalling transport | June 99 | | R3 | Mick Wilson | |
| 25.433 | 1.0.2 | UTRAN Iub interface NBAP signalling | Dec 99 | | R3 | Nobutaka Ishikawa | |
| 25.434 | 3.0.0 | UTRAN Iub interface data transport & transport signalling for CCH data streams | June 99 | | R3 | Magnus Aldén | |
| 25.435 | 0.2.1 | UTRAN Iub interface user plane protocols for CCH data streams | Oct 99 | | R3 | Jean-Marie Calmel | |
| 25.442 | 0.0.3 | UTRAN Implementation Specific O&M Transport | Oct 99 | | R3 | Stephan Recker | |
| 25.442 | 0.0.2 | UTRAN Implementation specific O&M transport | Oct 99 | | R3 | Stephan Recker | |
| 25.831 | 0.0.2 | Study Items for future release | Dec 99 | | R3 | Nicolas Drevon | |
| 25.832 | 2.1.1 | Manifestations of Handover and SRNS relocation | Oct 99 | | R3 | Richard Townend | |
| 25.921 | 1.0.0 | Guidelines and principles for protocol description and error handling | Oct 99 | | R2 | Jean Dumazy | |
| 25.922 | 0.2.0 | Radio Resource Management Strategies | Dec 99 | | R2 | Nicola Pio Magnani | |
| 25.923 | 1.0.0 | Location Services (LCS) features | Oct 99 | | R2 | David G Steer | |
| 25.924 | 0.1.0 | ODMA | Dec 99 | | R2 | | |
| 25.925 | 0.1.0 | Broadcast/Multicast services | Dec 99 | | R2 | | |
| 25.931 | 1.1.1 | UTRAN Functions, examples on signalling procedures | Oct 99 | | R3 | Enrico Scarrone | |
| 25.941 | 1.0.0 | RF Introduction | Dec 99 | | R4 | Tadao Takami | |
| 25.942 | 1.0.0 | RF system scenarios | Dec 99 | | R4 | Nadia Benabdallah | |
| 25.990 | 0.1.4 | Vocabulary for UTRAN | Oct 99 | | R4 | Howard Benn | |
| 26.071 | 3.0.0 | AMR speech Codec; General description | June 99 | | S4 | Erik Ekudden | |
| 26.073 | 0.1.0 | AMR speech Codec; C-source code | Oct 99 | | S4 | Erik Ekudden | |
| 26.074 | 1.0.0 | AMR speech Codec; Test sequences | Oct 99 | | S4 | Erik Ekudden | |

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| 26.090 | 3.0.0 | AMR speech Codec; Transcoding Functions | June 99 | | S4 | Erik Ekudden | |
| 26.091 | 3.0.0 | AMR speech Codec; Error concealment of lost frames | June 99 | | S4 | Erik Ekudden | |
| 26.092 | 3.0.0 | AMR speech Codec; comfort noise | June 99 | | S4 | Erik Ekudden | |
| 26.093 | 3.0.0 | AMR speech Codec; Source Controlled Rate operation | June 99 | | S4 | Erik Ekudden | |
| 26.094 | 0.1.0 | AMR Speech Codec Voice Activity Detector | Oct 99 | | S4 | | |
| 26.101 | 1.2.0 | AMR speech Codec; Frame Structure | Oct 99 | | S4 | Jari Hagqvist | |
| 26.102 | 0.2.0 | AMR speech Codec; Interface to Iu and Uu | Dec 99 | | S4 | Wiliam Navarro | |
| 26.110 | 3.0.0 | Codec for Circuit switched Multimedia Telephony Service; General Description | June 99 | | S4 | Barry Aronson | |
| 26.111 | 3.0.0 | Codec for Circuit switched Multimedia Telephony Service; Modifications to H.324 | June 99 | | S4 | Barry Aronson | |
| 26.112 | 1.1.0 | Codec for Circuit switched Multimedia Telephony Service; Call Set-Up Requirements | Oct 99 | | S4 | Harri Honko | |
| 26.121 | 0.0.0 | Technical Specification for Tandem Free Operation within 3G networks | Dec 99 | | S4 | | |
| 26.122 | 0.0.0 | Technical Specification for Tandem Free Operation between 3G and 2G networks | Dec 99 | | S4 | | |
| 26.901 | 0.0.0 | AMR speech Codec; performance characteristics | Dec 99 | | S4 | Alain Ohana | |
| 26.911 | 3.0.0 | Codec for Circuit switched Multimedia Telephony Service;Terminal Implementor's Guide | June 99 | | S4 | Petri Haavisto | |
| 26.912 | 1.0.0 | Codec for Circuit switched Multimedia Telephony Service;Quantitative performance evaluation of H.324 Annex C over 3G | Dec 99 | | S4 | Olle Franceschi | |
| 26.913 | 0.0.1 | Quantitative performance evaluation of real-time packet switched multimedia services over 3G | Dec 99 | | S4 | Harri Honko | |
| 26.915 | 0.0.0 | Transmission planning aspects of the services in 3G PLMN System | Dec 99 | | S4 | Ian Goetz | |
| 26.920 | 0.1.1 | Architectural Model for the 3G Transcoders | Dec 99 | | S4 | William Navarro | |
| 27.001 | 3.0.0 | General on Terminal Adaptation Functions (TAF) for Mobile Stations (MS) | April 99 | | N3 | | |
| 27.002 | 3.0.0 | Terminal Adaptation Functions (TAF) for services using Asynchronous bearer capabilities | April 99 | | N3 | | |
| 27.003 | 3.1.0 | Terminal Adaptation Functions (TAF) for services using Synchronous bearer capabilities | April 99 | | N3 | | CR at TSG#4 |
| 27.005 | 3.0.0 | Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE - DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS) | June 99 | | T2 | Lars Novak | |
| 27.007 | 3.1.0 | AT command set for 3G User Equipment (UE) | June 99 | | T2 | Lars Novak | CR at TSG#4 |
| 27.010 | 3.1.0 | Terminal Equipment to User Equipment (TE-UE) multiplexer protocol User Equipment (UE) | June 99 | | T2 | Lars Novak | CR at TSG#4 |
| 27.060 | 3.1.0 | GPRS Mobile Stations supporting GPRS | April 99 | | N3 | | CR at TSG#4 |
| 28.020 | 3.0.0 | Rate Adaptation on the BSS-MSC Interface | April 99 | | N3 | | |
| 29.002 | 3.1.0 | Mobile Application Part (MAP) | April 99 | | N2B | | CR at TSG#4 |

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| 29.004 | 3.0.0 | Interworking between the PLMN and the CSPDN | April 99 | | N3 | | |
| 29.005 | 3.0.0 | Interworking between the PLMN and the PSPDN | April 99 | | N3 | | |
| 29.006 | 3.0.0 | Interworking between a PLMN and the ISDN or PSTN for support of Packet Switched data transmission services | April 99 | | N3 | | |
| 29.007 | 3.0.0 | General requirements on Interworking between the PLMN and the ISDN or PSTN | April 99 | | N3 | | |
| 29.011 | 3.0.0 | Signalling Interworking for Supplementary Services | April 99 | | NSS | | |
| 29.016 | 3.0.0 | Serving GPRS Support Mode SGSN - Visitors Location Register (VLR); Gs Interface Network Service Specification | April 99 | | N1 | | |
| 29.018 | 3.1.0 | Serving GPRS Support Mode SGSN - Visitors Location Register (VLR); Gs Interface Layer 3 Specification | April 99 | | N1 | | CR at TSG#4 |
| 29.060 | 3.1.0 | GPRS Tunnelling protocol (GPT) across the Gn and Gp interface | April 99 | | N2B | | CR at TSG#4 |
| 29.061 | 3.1.0 | Interworking between the PLMN supporting GPRS and Packet Data Networks (PDN) | April 99 | | N3 | | CR at TSG#4 |
| 30.504 | 1.0.0 | Work Plan and Study Items - RAN WG4 | Dec 99 | | R4 | | |
| 30.531 | 0.1.2 | Work Plan and Study Items - RAN WG3 | Dec 99 | | R3 | | |
| 31.101 | 0.5.0 | UICC physical and logical characteristics | Dec 99 | | T3 | Rune Lindholm | |
| 31.102 | 0.5.0 | USIM characteristics | Dec 99 | | T3 | M. Kobayashi and Ch. Heim | |
| 32.101 | 1.0.0 | 3G Telecom Management principles and high level requirements | Oct 99 | | S5 | Michael Truss | |
| 32.102 | 1.0.0 | 3G Telecom Management architecture | Oct 99 | | S5 | Tommy Berggren | |
| 33.102 | 3.1.0 | Security Architecture | April 99 | | S3 | Bart Vinck | CR at TSG#4 |
| 33.103 | 1.0.0 | Security Integration Guidelines | Oct 99 | | S3 | Bart Vinck | |
| 33.105 | 3.0.0 | Cryptographic Algorithm requirements | June 99 | | S3 | Bart Vinck | |
| 33.106 | 3.0.0 | Lawful interception requirements | June 99 | | S3 | Bart Vinck | |
| 33.120 | 3.0.0 | Security Objectives and Principles | April 99 | | S3 | Tim Wright | |
| 33.901 | 3.0.0 | Criteria for cyptographic Algorithm design process | June 99 | | S3 | Vinck Bart | |
| 34.109 | 0.0.0 | Logical Test Interface (TDD and FDD) | Dec 99 | | T1 | | |
| 34.121 | 1.0.1 | Terminal Conformance Specification, Radio Transmission and Reception (FDD) | Oct 99 | | T1 | | |
| 34.122 | 0.0.0 | Terminal Conformance Specification, Radio Transmission and Reception (TDD) | Dec 99 | | T1 | | |
| 34.907 | 1.0.0 | Report on electrical safety requirements and regulations | Oct 99 | | T2 | Eiji Iimori | |
| 34.925 | 3.0.0 | Specific Absorbtion Rate (SAR) requirements and regulations in different regions | June 99 | | T2 | Sven Johnsson | |