Technical Specification Group Services and System Aspects **TSGS#22(03) 0684**

Meeting #22, Maui, Hawaii, USA, 15-18 December 2003

**Source:** **Chairman, Secretary SA1**

**Title:** **Status Report of SA_WG1 (Services)**

**Document for:** **Information and Decision**

**Agenda Item:** **7.1.1**

## TSG SA1 STATUS REPORT

# 1    General Overview of Progress

The TSG_SA_WG1#20 Plenary Meeting was held in Bangkok, Thailan from the 27th–31st October 2003. It was chaired by Mr Michele Zarri (T-Mobile) and the secretary was Mr Michael Clayton from the MCC. The host was the Japanese Friends of 3GPP.

# 2    External Liaisons

The following liaison statements have been sent from SA1 to external bodies.

| Document Number | Title | To | Copy | Sent |
|---|---|---|---|---|
| S1-031285 | LS on MMS targeting UE elements | T2 | The Java Community, JSR-205 Expert Group | 05/11/2003 |
| S1-031212 | STF228 User Interoperability Criteria | ETSI User Group | | 06/11/2003 |
| S1-031334 | LS on potential USIM impact of the MBMS security framework | T3 | SA3, EP SCP, RAN2 | 06/11/2003 |
| S1-031217 | Inquiry on Status of 3GPP Service Definition and Service Creation work | ETSI TC-TISPAN working group 1 | | 06/11/2003 |
| S1-031218 | MLPP in ETSI ISUP | ETSI TSPAN WG3 | ETSI OCG EMTEL | 06/11/2003 |
| S1-031303 | LS on Circuit Switched Interconnection | GSMA SerG | CN3, SA5, SA2 | 06/11/2003 |
| S1-031312 | UE Privacy and Security Framework | SA3 | GSMA SerG LBS | 06/11/2003 |
| S1-031326 | Reply to SA2 on GIS (S1-031082) | SA2 | OMA Location WG | 06/11/2003 |
| S1-031208 | LS on USIM changes for key management of Voice Group Call Services | SA3, T3 | ETSI EP RT, SerG | 06/11/2003 |

# 3    Change Requests sanctioned or requested by SA

The CRs in this section relate to issues that have been discussed in SA #21 and which were passed to SA1 for further elaboration. In all cases the principle of the change has been accepted by SA.

## 3.1    CRs to 22.038 on alignment with the T3 specifications on Emergency calls (R99, Rel-4 / 5 / 6)

This subject was brought up under the discussions relating to emergency calls. The CRs to 22.038 from R99 to Rel-6 align TS 22.038 with the T3 specifications TS 11.14 and TS 31.111. The Stage 1 (22.038) makes no mention of the ability for the Toolkit to request an emergency call set up from the ME.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030685 | 22.038 | 019 | - | R99 | F | CR to align TS 22.038 with the T3 specifications TS 11.14 and TS 31.111 | 3.3.0 | 3.4.0 | S1-031319 |
| SP-030685 | 22.038 | 020 | - | Rel-4 | A | CR to align TS 22.038 with the T3 specifications TS 11.14 and TS 31.111 | 4.2.0 | 4.3.0 | S1-031320 |
| SP-030685 | 22.038 | 021 | - | Rel-5 | A | CR to align TS 22.038 with the T3 specifications TS 11.14 and TS 31.111 | 5.3.0 | 5.4.0 | S1-031321 |
| SP-030685 | 22.038 | 022 | - | Rel-6 | A | CR to align TS 22.038 with the T3 specifications TS 11.14 and TS 31.111 | 6.1.0 | 6.2.0 | S1-031322 |

## 3.2    CRs to 22.115 on CS interconnection –BS30 (R99, Rel-4, Rel-5)

In SA #21 document SP-030527 on Inter-network accounting for BS30 based services such as Video telephony was presented.

The issue is to introduce a requirement for the determination of the user data rate and user protocols over CS interconnection cicuits, thus allowing identification and differential inter-network accounting for multi-media services e.g. videotelephony.

The proposals of the contribution were accepted in principle and WGs were asked to consider this and report back to TSG SA at the next meeting, where a decision on the practicality of introducing this can be made.

SA1 are aware of the work in CN3 and have drafted CRs from R99 onwards. The situation in SA5 is not known.

The CRs to 22.115 are presented in document SP-030686 for approval.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030686 | 22.115 | 017 | - | R99 | F | CR on 22.115 (Rel5): CS interconnection - requirements for the identification of user data rate and user protocol at the interconnection point e.g. for inter-network accounting purposes | 3.3.0 | 3.4.0 | S1-031297 |
| SP-030686 | 22.115 | 018 | - | Rel-4 | A | CR on 22.115 (Rel4): CS interconnection - requirements for the identification of user data rate and user protocol at the interconnection point for inter-network accounting purposes | 4.0.0 | 4.1.0 | S1-031298 |
| SP-030686 | 22.115 | 019 | - | Rel-5 | A | CR on 22.115 (Rel5): CS interconnection - requirements for the identification of user data rate and user protocol at the interconnection point for e.g. inter-network accounting purposes | 5.3.0 | 5.4.0 | S1-031299 |

For Rel-6, it would appear that the CR 22.115-15 (Rel6) was approved by SA#21 (SP-030467 based on S1-030976) is misleading. The information on CS calls is to be captured by GMSC gateway records, where the purpose is to settle inter-network accounting not charging. The related charging information is already covered by TS 32.250 CDRs.

Therefore, document SP-030701 contains the correction.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030701 | 22.115 | 016 | - | Rel-6 | F | CR on 22.115: CS interconnection – correction of an improper statement on the requirement for the identification of user data rate and user protocol at the interconnection point e.g. for inter-network | 6.2.0 | 6.3.0 | S1-031296 |

## 3.3 CR to 22.101 on Clarification of emergency call requirements (Rel-6)

At SA #21, document SP-030517 was presented on Clarification of Emergency Call Requirements against TS 22.101. This CR was provided by Lucent Technologies, Siemens and Nokia and was introduced by Lucent Technologies.

The proposed CR introduced a clear differentiation between requirements for the UE and requirements for the Core Network and clarification of the requirements for action for a UE to make an emergency call for various scenarios.

It was decided in SA #21 to send the CR to SA WG1 for further discussion, re-drafting and agreement. SA WG1 were asked to consider this at their October meeting and to invite experts from the co-located CN groups and SA WG2 to ensure an acceptable solution.

This has been done and the result in CR 22.101-137 presented for approval in document SP-030687.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030687 | 22.101 | 137 | - | Rel-6 | C | Clarification of emergency call requirements | 6.5.0 | 6.6.0 | S1-031344 |

## 3.4 CRs to 22.140 on MMS targetting UE elements and UICC interaction with MMS clients (Rel-6)

In SA #21, document SP-030461, which contained CRs to 22.140 and 22.038 on MM storage in the USIM (rel-6) was presented. It was generally agreed that the Storage and retrieval of MMs, Templates, etc. is a desirable feature and work on a technical solution should be progressed.

In the event, the CR on MM storage in the USIM was approved, but SA1 was asked to investigate what would happen if it is not possible to access the USIM from the MMS Client.

The result was CR 22.038-016 on MMS as data exchange mechanism for USAT. Operators can benefit from using USAT to send and receive MMs and/or elements of it. Existing MMS network infrastructure could be re-used in order to provide a robust, widely available, high bandwidth data transfer capability from and to USAT. Also the term MMS protocol is used and this gives a wider scope. It was commented that this CR indicates that MMS is the solution (and not the bearer) but this would depend on the decision at T.

In addition, to complete the package, CR 22.140-39 on MMS targetting UE elements is provided. Similarly to SMS this requirement introduces the possibility to send a MM to the UE which is not intended for the presentation to the user. A possible use case for this functionality is to play a game requiring interaction between the users.

On the issue of UICC interactions with MMS clients the CR 22.140-38 was passed to SA1 for further consideration. This was done and resulted in CR 22.140-40.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
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| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030689 | 22.038 | 016 | - | Rel-6 | B | MMS as an additional data exchange capability for USAT | 6.1.0 | 6.2.0 | S1-031330 |
| SP-030689 | 22.140 | 039 | - | Rel-6 | B | MMS targetting UE elements | 6.3.0 | 6.4.0 | S1-031240 |
| SP-030689 | 22.140 | 040 | - | Rel-6 | B | UICC interaction with MMS clients | 6.3.0 | 6.4.0 | S1-031338 |

# 4 Change Requests for Rel-5

The following CRs are for Release 5.

## 4.1 CRs to 22.038 on Enabling Cell Broadcast Bearer for USAT application while connected to UTRAN networks (Rel-5, Rel-6)

Cell Broadcast Data Download is a service available in the USAT to download cell broadcast messages to the USAT and allow USAT applications to process and use such messages. Currently the definition of CB as a USAT bearer is limited to GSM networks only.

It was reported in SA1 that T2 will need to be informed of this in order to complete the package, but that the CRs for T2 were available. In order to inform T2 of the outcome, SA1 has sent the CRs in a liaison statement to T2.

The CRs are presented in document SP-030688 for approval.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030688 | 22.038 | 017 | - | Rel-5 | F | Enable Cell Broadcast Bearer for USAT application while connected to UTRAN networks | 5.3.0 | 5.4.0 | S1-031335 |
| SP-030688 | 22.038 | 018 | - | Rel-6 | A | Enable Cell Broadcast Bearer for USAT application while connected to UTRAN networks | 6.1.0 | 6.2.0 | S1-031336 |

## 4.2 CRs to 22.071 on Removal of misleading and obsolete text (Rel-5, Rel-6)

Document SP-030690 contains two CRs to 22.071 for Rel-5 and Rel-6.

Currently the scope of 22.071 keeps track of LCS development in 3GPP releases starting from Rel-99. It has not been updated since the beginning of Rel-4. It is proposed to remove this reference to individual releases from the scope since it is a source for errors.

Also 22.071 requires that "LCS shall support the Open Service Architecture (OSA) standardized Application Programming Interface (API)." However this is not an LCS requirement, but rather an OSA requirement, which is covered in the OSA stage 1 [22.127, section 13.3.2 (User Location Functions)]. Hence this text is being proposed for removal.

The CRs are presented in document SP-030690 for approval.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030690 | 22.071 | 061 | - | Rel-5 | F | Removal of misleading and obsolete text | 5.2.0 | 5.3.0 | S1-031327 |
| SP-030690 | 22.071 | 062 | - | Rel-6 | A | Removal of misleading and obsolete text | 6.5.0 | 6.6.0 | S1-031328 |

### 4.3 CR to 22.071 on Removal of change of area event (Rel-5)

Another CR to 22.071 is presented to Rel-5 in document SP-030691. The change of area event feature is not implemented in stage 2 or 3 Rel-5. SA2 has requested its removal. The requirement is retained in Rel-6.

CR 22.071-065 is presented for approval in document SP-030691.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030691 | 22.071 | 065 | - | Rel-5 | F | Removal of change of area event | 5.2.0 | 5.3.0 | S1-031274 |

### 4.4 CRs to 22.078 on CLIR interaction with CSE initiated calls (Rel-5, Rel-6)

At the last meeting, SA1 received a CR to clarify the interaction of CLIR/CLIP with CSE related calls. The CR seeks to establish how the CLIR indicator should be set when a call is handled by the CSE.

The CRs 22.078-163 and 22-078-164 are prsented in document SP-030692 for approval.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030692 | 22.078 | 163 | - | Rel-5 | F | CLIR/CLIP interaction with CSE initiated calls | 5.11.0 | 5.12.0 | S1-031315 |
| SP-030692 | 22.078 | 164 | - | Rel-6 | A | CLIR/CLIP interaction with CSE initiated calls | 6.2.0 | 6.3.0 | S1-031308 |

### 4.5 CRs to 22.078 on Allowing CSE to suppress terminating CAMEL handling (Rel-5, Rel-6)

Two CRs were received by SA1 from CN2 on allowing CSE to suppress terminating CAMEL handling to allow for Personal Ring Back Tone (PRBT) services.

These kind of services are not feasible with the current Call Party Handling definition of CAMEL Phase 4 in Rel-5. The reason is that the CAP Operation Split Leg, which is used to split a call leg off from the primary Call Segment (i.e. putting a call party on hold) has the pre-condition that the leg to be split shall be in the Active state (i.e. call party shall have answered). That pre-condition prevents the usage of Split Leg at *call establishment* or at at *called party alerting*. And as a result, the above described kind of Personal Ring Back Tone Service is not possible.

The CRs 22.078-165 and 22.078-166 are presented for approval in document SP-030693.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030693 | 22.078 | 165 | - | Rel-5 | F | Allowing CSE to suppress terminating CAMEL handling on new leg in existing call | 5.11.0 | 5.12.0 | S1-031316 |

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030693 | 22.078 | 166 | - | Rel-6 | A | Allowing CSE to suppress terminating CAMEL handling on new leg in existing call | 6.2.0 | 6.3.0 | S1-031317 |

# 5 Change Requests for Rel-6

ThSe following sections contain CRs to release 6.

## 5.1 CRs to 21.905 on various subjects (Rel-6)

There are two CRs to 21.905 on definitions and abbreviations.

CR 21.905-053 adds the terms "IP-CAN" and "IP-CAN bearer", which have been used in specifications by multiple working groups (e.g. SA2 and CN1).

CR 21.905-054 changes the defintion of the term Base Station. This change reflects a decision taken in TSG RAN4#18 which was confirmed by TSG GERAN to modify the base station definition in Vocabulary document TR21.905.

The CRs are presented in document SP-030694 for approval.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030694 | 21.905 | 053 | - | Rel-6 | F | Terminology addtions for IP-CAN and IP-CAN bearer | 6.4.0 | 6.5.0 | S1-031145 |
| SP-030694 | 21.905 | 054 | - | Rel-6 | F | Modified base station definition | 6.4.0 | 6.5.0 | S1-031311 |

## 5.2 CR to 22.011 on Administrative restriction of subscribers' access (Rel-6)

For combined GERAN/UTRAN networks it can be important to be able to control the distribution of subscribers between the GERAN and UTRAN respectively. To make this happen it would be beneficial to be able to mark individual subscribers, in their subscription information, as being "GERAN" or "UTRAN" subscribers respectively. This would also enable a better control of the QoS offered to different subscriber groups and to differentiate incoming roamers' access to RATs in combined networks.

Whilst this could be done using the Regional Subscription data to restrict a subscriber's access to selected Location/Routing Areas, trying to combine both a geographical and a RAT based limitation in one and the same subscription data parameter could lead to a very complex administrative task, both to fill in the subscription data and to decide how the parameter values should be translated into allowed/forbidden Location/Routing Areas.

It is therefore proposed to introduce a new "dimension" of restricting a subscriber's access to the system. It is also proposed to base this restriction on categories of Location/Routing Areas

The CR 22.011-053 to do this is presented in document SP-030965 for approval.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030695 | 22.011 | 053 | - | Rel-6 | B | Administrative restriction of | 6.1.0 | 6.2.0 | S1-031234 |

| | | | | | subscribers' access | | | |
|---|---|---|---|---|---|---|---|---|

## 5.3 CRs to 22.038 on Various subjects (Rel-6)

Document SP-030696 contains a CR to 22.038 which is intended to widen the scope of the interation between the USAT and the ME. A USAT application currently has the possibility to launch a browser on the handset. Since a broad range of applications can now be available on the handset, it would be useful to be able to start other kinds of ME based applications.

This would enable the development of cooperative applications partly based on the ME interacting with a USIM based part, opening up a wide range of possibilities. Such a feature would be very valuable to network operators as it could be used in many different scenarios such as:

A) network management optimization: USAT launches an application in the mobile that reports to the USIM channels and application metrics for network performance monitoring.
B) Proactive syncronization: USAT application, triggered by suitable events, may command the start of a data synchronization process (e.g. for subscriber related parameters or TE configuration data) that may involve data entities in the UE and in a synchronization server.
C) Streaming: USAT may launch a streaming client in the terminal to reproduce an adressed audio/video resource.

It is proposed that these requirements apply to Rel-6 since they enable operator valuable use cases that profits from the possible interaction of USAT applications and Rel-6 3GPP services.

The CR 22.038-015 is presented for approval in document SP-030696.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030696 | 22.038 | 015 | - | Rel-6 | B | Interaction between ME and USAT applications | 6.1.0 | 6.2.0 | S1-031220 |

## 5.4 CRs to 22.071 on Various subjects (Rel-6)

There are three CRs to 22.071 Rel-6:

The first contains a proposal to include Advanced Geographic Description (AGD) information. Advanced geographic description (AGD) is a positioning that can be related to a particular location defined in terms of points, area or volume on the Earth. Thus, AGD is an improvement of the usability of location information provided in shapes as defined in TS 23.032 or in local reference systems.

The second contains a correction to the velocity requirement. Currently, requirements in 4.3.1 (Horizontal accuracy) state on determination of velocity that "the response to a single request may provide the results of multiple positionings". This could be interpreted to suggest a particular implementation of the requirement to provide velocity, which should be avoided in stage 1.

Finally, the last contains a correction to the high level requirements in order to allow the Cell ID to be used for positioning. In North America this information (serving cell id) is required to be passed to the emergency centers (PASPs) as part of the FCC E911 phase 1 mandate.

The cell id is needed because the NA-ESRD (which is used to provide the phase1 information) is not always sent by the MSC to GMLC, and if an NA-ESRK is sent, the GMLC only has the phase2 information and not phase1 information (cell id or ESRD).

The three CRs are provided in document SP-030697.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030697 | 22.071 | 060 | - | Rel-6 | B | Support of "Advanced Geographic Description" (AGD) information | 6.5.0 | 6.6.0 | S1-031269 |
| SP-030697 | 22.071 | 063 | - | Rel-6 | F | Correction of "velocity" requirements | 6.5.0 | 6.6.0 | S1-031272 |
| SP-030697 | 22.071 | 064 | - | Rel-6 | B | Cell ID | 6.5.0 | 6.6.0 | S1-031329 |

## 5.5 CRs to 22.078 on Various subjects (Rel-6)

Two CRs are presented to 22.078 Rel-6.

The first adds criteria "inter-MSC handover" for change of position procedures. After the approval of 22.078-160, it was noted at CN2 #30 in Sophia Antipolis that inter-MSC handover was not listed as one of the criteria for reporting the handover event. Since there are ten allowed criteria it is not possible to define all the possible inter-MSC handovers in one CAP_RequestReportBCSMEvent (stage 3). One solution would be to keep sending CAP_RequestReportBCSMEvent after detection of handover near the border of the MSC service area. However it would cost a lot of signalling load.

Therefore, it would be useful to have the "inter-MSC handover" as one of the criteria to save the number of criteria to be sent by the CSE.

The second relates to CAMEL4 prepay interworking with SCUDIF. It was reported that Operators may want to charge multimedia calls differently to speech calls for prepay.

The two CRs are presented for approval in SP-030698.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030698 | 22.078 | 162 | - | Rel-6 | F | Add criteria "inter-MSC handover" for change of position procedures | 6.2.0 | 6.3.0 | S1-031194 |
| SP-030698 | 22.078 | 167 | - | Rel-6 | B | CAMEL4 prepay interworking with SCUDIF | 6.2.0 | 6.3.0 | S1-031318 |

## 5.6 CR to 22.094 on Notification of forced erasure to initiating subscriber A (Rel-6)

Document SP-030699 contained a CR to the Follow Me service description. With the forced erasure procedure, a service supervisor is able to erase the Follow Me data which have been registered by the previous initiating subscriber. However, the notification of the erasure to the

previous initiating subscriber is not specified.

The notification of the successful forced erasure to the previously registered subscriber is an important feature for GSM-R.

CR 22.094-003 is presented in document SP-030699 for approval to correct this.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030699 | 22.094 | 003 | - | Rel-6 | B | Notify of forced erasure to initiating subscriber A | 5.0.0 | 5.1.0 | S1-031219 |

## 5.7    CRs to 22.101 on Various subjects (Rel-6)

Two CRs to 22.101 are presented for approval:

The first relates to Automatic Device Configuration (ADC), which is believed to be an important feature to increase the possibility for take-off of new services. This would be triggered by an Automatic Device Detection (ADD) functionality, notifying the home environment that a user has changed terminal. This would enable out-of-the-box operation for all terminals by avoiding the need for end users to ask for a configuration, by avoiding the need to rely on factory-configuration settings only and by the ability to handle both old and new terminals.

The second relates contains a Correction of Core Network emergency call requirements. The current specification does not correctly describe the Emergency call requirements to be fulfilled by the Core Network (CN).

The two CRs are provided in document SP-030700 for approval.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030700 | 22.101 | 135 | - | Rel-6 | B | Automatic Device Detection | 6.5.0 | 6.6.0 | S1-031339 |
| SP-030700 | 22.101 | 136 | - | Rel-6 | C | Correction of Core Network emergency call requirements | 6.5.0 | 6.6.0 | S1-031342 |

## 5.8    CR to 22.127 on Removal of  Visited Network capabilities (Rel-6)

At the last CN Plenary the functions for retrieval of visited network capabilities were deleted from their workplan. This topic will not complete in Rel-6 and so need to be removed from the Rel-6 stage 1.

Document SP-030702 removes these functions from the stage 1.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030702 | 22.127 | 068 | - | Rel-6 | C | Removal of  Visited Network capabilities | 6.3.0 | 6.4.0 | S1-031150 |

## 5.9 CR to 22.127 to Introduce High Availability requirement for OSA (Rel-6)

At the last SA1 meeting a proposal was received to support for High Availability in OSA, which is currently limited to a small subset of the available OSA features, e.g., Call Control. It was reported that the absence of a fully defined high availability approach for OSA requires vendor specific solutions for realizing high availability including geographical redundancy. These vendor specific solutions are neither technology independent nor interoperable in a multi-vendor deployment.

It was reported in SA1 that a substantial discussion had been held in CN5 and that a solution was available. The impression given was that all that was required was a requirement. However, it has been identified that whilst this was discussed in CN5, no decision had been made as to the most appropriate solution.

This notwithstanding, the requirement is generic enough to allow for a number of solutions. The choice of solution is the remit of CN5 and so prior to approval it may be appropriate to consult CN and CN5.

The CR for the stage 1 is provided in document SP-030703.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030703 | 22.127 | 069 | - | Rel-6 | F | Introduce High Availability requirement for OSA | 6.3.0 | 6.4.0 | S1-031232 |

## 5.10 CR to 22.129 on Service based handover/assignment (Rel-6)

With the existance of both UTRAN and GERAN, it is clear that not all services supported by UTRAN are supported by GERAN and vice-versa. Currently the stage 1 does not contain a requirement that it shall be possible for the network based on the requested service to recommend handover of the UE to a RAT supporting the desired service.

CR 22.129-028 is provided for approval in document SP-030704.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030704 | 22.129 | 028 | 4 | Rel-6 | B | Service based handover/assignment | 6.0.0 | 6.1.0 | S1-031300 |

## 5.11 CR to 22.228 on Multi terminal requirement (Rel-6)

Within 22.800 there is a scenario regarding the multi terminals support in IMS scenario specified. In this scenario there is a requirement "IMS shall be able to support Intelligent routing towards the correct terminal(s), based on Terminal capability, User preference and/or Network preferences." However, this requirement is lost when this scenario is included in 22.228. It is also felt that this is an important requirement both valuable for user experience and operator service provision. Therefore, it shall be clearly stated in 22.228 before mistakes are made in stage 2 and 3.

Therefore, CR 22.228-022 is presented for approval in document SP-030706.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030706 | 22.228 | 022 | - | Rel-6 | C | Multi terminal requirement in 22.228 | 6.4.0 | 6.5.0 | S1-031314 |

## 5.12  CRs to 22.240 on various subjects (Rel-6)

There are three CRs presented to 22.240 on GUP.

The first relates to the requirements in section 6 of TS 22.240, which need to be tidied up. It would appear that the same requirement re-appears in a slightly different way, and the requirements need to be clearly distinguished from explanatory text.

The second CR relates to section 6 of TS 22.240, in which the requirement can be found that GUP access mechanism shall include read, create, modify and delete access. However this has not been further specified.  The CR tries to close this gap in GUP.

Finally, the third relates to the description of the GUP synchronisation model, which it is thought  is unclear.

The three CRs are provided in document SP-030707 for approval.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030707 | 22.240 | 02 | - | Rel-6 | F | Clarifications on general service requirements and data description requirements | 6.1.0 | 6.2.0 | S1-031256 |
| SP-030707 | 22.240 | 03 | - | Rel-6 | F | Clarifications GUP data access and administration | 6.1.0 | 6.2.0 | S1-031257 |
| SP-030707 | 22.240 | 04 | - | Rel-6 | F | Clarifications  on GUP synchronisation | 6.1.0 | 6.2.0 | S1-031258 |

## 6     New TSs/TRs

SA1 has two TSs to present for approval.

## 6.1    TS 22.246 on MBMS User Services for approval (Rel-6)

Within SA1 work has been progressing to define the MBMS requirements necessary for SA4 to specify the codec(s) and protocols required for MBMS, according to the WID originally approved at SA#20 within SP-030347. These requirements are being defined within TS 22.246.

The TS is now ready for approval in document SP-030708 to SA.

TS 22.246 describes the MBMS User Service scenarios and service requirements that can be used as guidance for the design of  codecs and bearers for both UTRAN and GERAN

The Changes since last presentation to TSG SA are:

- General editorial corrections, clarifications and consistency changes
- Classification of user services
- Elaboration of user service, transport service and session relationships

- Inclusion of delivery verification requirements

The only outstanding issues are user service requirements for key management with respect to security and charging. It is anticipated that this issue will be completed in March 2004.

There are no contentious issues.

### 6.1.1 CR to 22.146 on Alignment of MBMS use cases and bit rates (Rel-6)

According to the WID approved in SP-030442 the requirements for MBMS User Services are specified within TS 22.246. Although non-exhaustive, the study of MBMS User Services has resulted in a number of use cases for user services provided over the application independent MBMS transport service, including appropriate bit rates, to be described in detail within TS 22.246.

The use cases detailed within TS 22.246 duplicates and goes beyond that provided within Annex A of TS 22.146 rendering this section irrelevant to the specification of MBMS. Hence, the text within Annex A of TS 22.146 should be removed and replaced with a reference to the specification for MBMS User Services.

Should SP-030708 be approved, then the CR in SP-030705 should also be approved.

| Doc-1st-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New | Doc-2nd-Level |
|---|---|---|---|---|---|---|---|---|---|
| SP-030705 | 22.146 | 041 | - | Rel-6 | F | Alignment of MBMS use cases and bit rates | 6.2.0 | 6.3.0 | S1-031010 |

## 6.2 TR 22.952 on Priority Service guide for approval (Rel-6)

The Technical Report (TR) 22.952 provides a "Guide" for Priority Service, the intent of which is to describe how existing 3GPP specifications support the high-level requirements identified for Priority Service in TR 22.950. TR 22.952 addresses the Service Aspects (Service Description), Network Aspects (Call Flows), and Management Aspects (Operations, Administration, Maintenance, and Provisioning) of Priority Service, based on existing 3GPP specifications.

Priority Service is intended to be used for both Voice and Data. However, draft TR 22.952 only addresses Circuit Switched Voice Service. Data, multimedia and non-circuit switched aspects of Priority Service have not been addressed and are for further study.

Priority Service is intended to interwork with external circuit-switched networks to provide an end-to-end service.

Changes since last presentation to TSG SA are:

- General editorial corrections and clarification.
- Clarification of roaming aspects for Priority Service and eMLPP users.
- Clarification of radio resource queuing cases.

SA1 is awaiting comments from SerG on treatment of Priority Service calls terminating in eMLPP networks. Also, work is required to address specific proposals made by RAN3.

There are no contentious issues and so it is presented for approval in document SP-030709.

### 6.3 TR 22.949, Study on a Generalised Privacy Capability Version 1.0.0 for information (Rel-6) (Rel-6)

The Generalised Privacy Capability TR aims to investigate and summarise the service requirements on privacy for 3GPP services. In order to ensure that these services and future 3GPP services will have a consistent set of rules that control the availability and usage of confidential information, it is the intention to standardise a common privacy capability in the network.

Currently there are no outstanding issues and no controversial issues. It is presented for information in SP-030718.

## 7 WIs from SA1

SA1 has three updated WIs to present for approval.

### 7.1 Update of Rel 6 OSA WID

CN5 have identified work item features which are not progressing and are not expected to be completed as part of Rel-6.

CN Plenary agreed that two issues will not be worked further in Rel-6 and this decision is supported by the lack of input documents provided on:

    15027 - Enhanced user privacy in LCS
    15024 - Retrieval of Visited Network capabilities

As CN group have no intention to develop 15024 and 15027 it is proposed to modify the Stage 1 WI to reflect this here and a further CR is provided in SP-030702 to amend the TS.

Document SP-030710 contains a correction to the WI. There is also a correction to reflect that this is a feature and that OSA Stage 3 (CN5) is a building block.

### 7.2 Update of GUP WID

SA1 is asking SA to agree on the following updates of GUP Work Item Description:

- Removal of Linked Work Item "UE Management", as this was decided at SA#21.
- Removal of the name of the rapporteur and the time scales for approval for TS 23.241 (The 3GPP Generic User Profile (stage 2)- Data Description Method) and TS 24.241 (The 3GPP Generic User Profile (stage 3) - Common objects) from the present WID. Instead the reference to the WI "3GPP Generic User Profile Data Description Method" is given (latest version in TP-020275). That Work Item is a building block under the GUP WI and which contains that information on TS 23.241 and TS 24.241.
- Addition of the name of the rapporteur and the time scales for approval for TS 29.240 (The 3GPP Generic User Profile (stage 3; network)) as requested by CN4.-
  Correction of a typo in the name of rapporteur of TS 23.240

The updated WI is presented in document SP-030711.

## 7.3    Update of WLAN WID

The last WID is that of WLAN. The changes are to update the status of 22.934 (completed) and to introduce TS 22.234 containing I-WLAN Stage 1 Service Requirements. Also the supporting companies are updated.

It is provided in document SP-030712 for approval.

## 8    Other Issues

There are no other issues at this time.

## 9    Meetings of SA1

## 9.1    Meetings since last SA

The following meetings have been held since SA #21.

| Meeting | Date | Place | Host |
|---|---|---|---|
| MBMS SWG | 6 – 8 August 2003 | Staines, UK | Samsung |
| Emergency Calls Ad Hoc | 25th–26th August 2003 | Phoenix, Arizona USA | |
| SA1#22 | 27 - 31 October 2003, | Bankok, Thailand | Japanese Friends of 3GPP |

## 9.2    Planned meetings

SA1 has the following meetings scheduled, so far.

## SA1 Plenary

| Meeting | Date | Place | Host |
|---|---|---|---|
| SA1#23 | 12 –16 January 2004 | Europe | T.B.A. |
| ~~SA1#24~~ | ~~19 – 23 April 2004~~ | ~~Asia, China~~ | ~~ZTE~~ |
| SA1#24 | 10 – 14 May 2004 | Shenzhen , China | ZTE |
| SA1#25 | 28 June – 02 July 2004 | North America | NA friends of 3GPP |
| SA1#26 | 11 – 15 October 2004 | Europe | European friends of 3GPP |

## SA1 SWGs

None

## Annex 1: Documents provided to this Plenary

| Tdoc | Title | Agenda |
|------|-------|--------|
| SP-030683 | Presentation of SA1 to SA #22 | 7.1.1 |
| SP-030684 | Status report of SA1 to SA #22 | 7.1.1 |
| SP-030685 | CRs to 22.038 on alignment with the specifications TS 11.14 and TS 31.111 (R99, Rel-4, Rel-5, Rel-6) | 7.1.3 |
| SP-030686 | CRs to 22.115 on CS interconnection – requirements for the identification of user data rate and user protocol at the interconnection point (R99, Rel-4, Rel-5) | 7.1.3 |
| SP-030687 | CR to 22.101 on Clarification of emergency call requirements (Rel-6) | 7.1.3 |
| SP-030688 | CRs to 22.038 on Enabling Cell Broadcast Bearer for USAT application while connected to UTRAN networks (Rel-5, Rel-6) | 7.1.3 |
| SP-030689 | CRs to 22.140 and 22.038 on MMS and UICC interaction with MMS clients (Rel-6) | 7.1.3 |
| SP-030690 | CRs to 22.071 on Removal of misleading and obsolete text (Rel-5, Rel-6) | 7.1.3 |
| SP-030691 | CR to 22.071 on Removal of change of area event (Rel-5) | 7.1.3 |
| SP-030692 | CRs to 22.078 on CLIR/CLIP interaction with CSE initiated calls (Rel-5, Rel-6) | 7.1.3 |
| SP-030693 | CRs to 22.078 on Allowing CSE to suppress terminating CAMEL handling on new leg in existing call (Rel-5, Rel-6) | 7.1.3 |
| SP-030694 | CRs to 21.905 on various subjects (Rel-6) | 7.1.3 |
| SP-030695 | CR to 22.011 on Administrative restriction of subscribers' access (Rel-6) | 7.1.3 |
| SP-030696 | CRs to 22.038 on Interaction between ME and USAT applications and MMS as an additional data exchange capability for USAT (Rel-6) | 7.1.3 |
| SP-030697 | CRs to 22.071 on Various subjects (Rel-6) | 7.1.3 |
| SP-030698 | CRs to 22.078 on Various subjects (Rel-6) | 7.1.3 |
| SP-030699 | CR to 22.094 on Notification of forced erasure to initiating subscriber A (Rel-6) | 7.1.3 |
| SP-030700 | CRs to 22.101 on Automatic Device Detection and Correction of Core Network emergency call requirements (Rel-6) | 7.1.3 |
| SP-030701 | CR to 22.115 on CS interconnection (Rel-6) | 7.1.3 |
| SP-030702 | CR to 22.127 on Removal of Visited Network capabilities (Rel-6) | 7.1.3 |
| SP-030703 | CR to 22.127 to Introduce High Availability requirement for OSA (Rel-6) | 7.1.3 |
| SP-030704 | CR to 22.129 on Service based handover/assignment (Rel-6) | 7.1.3 |
| SP-030705 | CR to 22.146 on Alignment of MBMS use cases and bit rates (Rel-6) | 7.1.3 |

| SP-030706 | CR to 22.228 on Multi terminal requirement (Rel-6) | 7.1.3 |
|---|---|---|
| SP-030707 | CRs to 22.240 on various subjects (Rel-6) | 7.1.3 |
| SP-030708 | TS 22.246 on MBMS User Services for approval (Rel-6) | 7.1.3 |
| SP-030709 | TR 22.952 on Priority Service guide for approval (Rel-6) | 7.1.3 |
| SP-030710 | Update of Rel 6 OSA WID | 7.1.3 |
| SP-030711 | Update of GUP WID | 7.1.3 |
| SP-030712 | Update of WLAN WID | 7.1.3 |
| SP-030718 | TR 22.949, Study on a Generalised Privacy Capability Version 1.0.0 for information (Rel-6) | 7.1.3 |

## Annex 2: CRs provided to this Plenary

| SA Meet | SA Doc. | Spec | CR | Rev | Phase | Cat | Subject | Vers | New Vers | SA1 Doc |
|---------|---------|------|-----|-----|-------|-----|---------|------|----------|---------|
| SP-22 | SP-030694 | 21.905 | 053 | - | Rel-6 | F | Terminology addtions for IP-CAN and IP-CAN bearer | 6.4.0 | 6.5.0 | S1-031145 |
| SP-22 | SP-030694 | 21.905 | 054 | - | Rel-6 | F | Modified base station definition | 6.4.0 | 6.5.0 | S1-031311 |
| SP-22 | SP-030695 | 22.011 | 053 | - | Rel-6 | B | Administrative restriction of subscribers' access | 6.1.0 | 6.2.0 | S1-031234 |
| SP-22 | SP-030696 | 22.038 | 015 | - | Rel-6 | B | Interaction between ME and USAT applications | 6.1.0 | 6.2.0 | S1-031220 |
| SP-22 | SP-030689 | 22.038 | 016 | - | Rel-6 | B | MMS as an additional data exchange capability for USAT | 6.1.0 | 6.2.0 | S1-031330 |
| SP-22 | SP-030688 | 22.038 | 017 | - | Rel-5 | F | Enable Cell Broadcast Bearer for USAT application while connected to UTRAN networks | 5.3.0 | 5.4.0 | S1-031335 |
| SP-22 | SP-030688 | 22.038 | 018 | - | Rel-6 | A | Enable Cell Broadcast Bearer for USAT application while connected to UTRAN networks | 6.1.0 | 6.2.0 | S1-031336 |
| SP-22 | SP-030685 | 22.038 | 019 | - | R99 | F | CR to align TS 22.038 with the T3 specifications TS 11.14 and TS 31.111 | 3.3.0 | 3.4.0 | S1-031319 |
| SP-22 | SP-030685 | 22.038 | 020 | - | Rel-4 | A | CR to align TS 22.038 with the T3 specifications TS 11.14 and TS 31.111 | 4.2.0 | 4.3.0 | S1-031320 |
| SP-22 | SP-030685 | 22.038 | 021 | - | Rel-5 | A | CR to align TS 22.038 with the T3 specifications TS 11.14 and TS 31.111 | 5.3.0 | 5.4.0 | S1-031321 |
| SP-22 | SP-030685 | 22.038 | 022 | - | Rel-6 | A | CR to align TS 22.038 with the T3 specifications TS 11.14 and TS 31.111 | 6.1.0 | 6.2.0 | S1-031322 |
| SP-22 | SP-030697 | 22.071 | 060 | - | Rel-6 | B | Support of "Advanced Geographic Description" (AGD) information | 6.5.0 | 6.6.0 | S1-031269 |
| SP-22 | SP-030690 | 22.071 | 061 | - | Rel-5 | F | Removal of misleading and obsolete text | 5.2.0 | 5.3.0 | S1-031327 |
| SP-22 | SP-030690 | 22.071 | 062 | - | Rel-6 | A | Removal of misleading and obsolete text | 6.5.0 | 6.6.0 | S1-031328 |
| SP-22 | SP-030697 | 22.071 | 063 | - | Rel-6 | F | Correction of "velocity" requirements | 6.5.0 | 6.6.0 | S1-031272 |
| SP-22 | SP-030697 | 22.071 | 064 | - | Rel-6 | B | Cell ID | 6.5.0 | 6.6.0 | S1-031329 |
| SP-22 | SP-030691 | 22.071 | 065 | - | Rel-5 | F | Removal of change of area event | 5.2.0 | 5.3.0 | S1-031274 |
| SP-22 | SP-030698 | 22.078 | 162 | - | Rel-6 | F | Add criteria "inter-MSC handover" for change of position procedures | 6.2.0 | 6.3.0 | S1-031194 |

| SP-22 | SP-030692 | 22.078 | 163 | - | Rel-5 | F | CLIR/CLIP interaction with CSE initiated calls | 5.11.0 | 5.12.0 | S1-031315 |
|-------|-----------|--------|-----|---|-------|---|------------------------------------------------|--------|--------|-----------|
| SP-22 | SP-030692 | 22.078 | 164 | - | Rel-6 | A | CLIR/CLIP interaction with CSE initiated calls | 6.2.0 | 6.3.0 | S1-031308 |
| SP-22 | SP-030693 | 22.078 | 165 | - | Rel-5 | F | Allowing CSE to suppress terminating CAMEL handling on new leg in existing call | 5.11.0 | 5.12.0 | S1-031316 |
| SP-22 | SP-030693 | 22.078 | 166 | - | Rel-6 | A | Allowing CSE to suppress terminating CAMEL handling on new leg in existing call | 6.2.0 | 6.3.0 | S1-031317 |
| SP-22 | SP-030698 | 22.078 | 167 | - | Rel-6 | B | CAMEL4 prepay interworking with SCUDIF | 6.2.0 | 6.3.0 | S1-031318 |
| SP-22 | SP-030699 | 22.094 | 003 | - | Rel-6 | B | Notify of forced erasure to initiating subscriber A | 5.0.0 | 5.1.0 | S1-031219 |
| SP-22 | SP-030700 | 22.101 | 135 | - | Rel-6 | B | Automatic Device Detection | 6.5.0 | 6.6.0 | S1-031339 |
| SP-22 | SP-030700 | 22.101 | 136 | - | Rel-6 | C | Correction of Core Network emergency call requirements | 6.5.0 | 6.6.0 | S1-031342 |
| SP-22 | SP-030687 | 22.101 | 137 | - | Rel-6 | C | Clarification of emergency call requirements | 6.5.0 | 6.6.0 | S1-031344 |
| SP-22 | SP-030701 | 22.115 | 016 | - | Rel-6 | F | CR on 22.115: CS interconnection – correction of an improper statement on the requirement for the identification of user data rate and user protocol at the interconnection point e.g. for inter-network | 6.2.0 | 6.3.0 | S1-031296 |
| SP-22 | SP-030686 | 22.115 | 017 | - | R99 | F | CR on 22.115 (Rel5): CS interconnection – requirements for the identification of user data rate and user protocol at the interconnection point e.g. for inter-network accounting purposes | 3.3.0 | 3.4.0 | S1-031297 |
| SP-22 | SP-030686 | 22.115 | 018 | - | Rel-4 | A | CR on 22.115 (Rel4): CS interconnection – requirements for the identification of user data rate and user protocol at the interconnection point for inter-network accounting purposes | 4.0.0 | 4.1.0 | S1-031298 |
| SP-22 | SP-030686 | 22.115 | 019 | - | Rel-5 | A | CR on 22.115 (Rel5): CS interconnection – requirements for the identification of user data rate and user protocol at the interconnection point for e.g. inter-network accounting purposes | 5.3.0 | 5.4.0 | S1-031299 |
| SP-22 | SP-030702 | 22.127 | 068 | - | Rel-6 | C | Removal of  Visited Network | 6.3.0 | 6.4.0 | S1-031150 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | capabilities | | | |
| SP-22 | SP-030703 | 22.127 | 069 | - | Rel-6 | F | Introduce High Availability requirement for OSA | 6.3.0 | 6.4.0 | S1-031232 |
| SP-22 | SP-030704 | 22.129 | 028 | 4 | Rel-6 | B | Service based handover/assignment | 6.0.0 | 6.1.0 | S1-031300 |
| SP-22 | SP-030689 | 22.140 | 039 | - | Rel-6 | B | MMS targetting UE elements | 6.3.0 | 6.4.0 | S1-031240 |
| SP-22 | SP-030689 | 22.140 | 040 | - | Rel-6 | B | UICC interaction with MMS clients | 6.3.0 | 6.4.0 | S1-031338 |
| SP-22 | SP-030705 | 22.146 | 041 | - | Rel-6 | F | Alignment of MBMS use cases and bit rates | 6.2.0 | 6.3.0 | S1-031010 |
| SP-22 | SP-030706 | 22.228 | 022 | - | Rel-6 | C | Multi terminal requirement in 22.228 | 6.4.0 | 6.5.0 | S1-031314 |
| SP-22 | SP-030707 | 22.240 | 02 | - | Rel-6 | F | Clarifications on general service requirements and data description requirements | 6.1.0 | 6.2.0 | S1-031256 |
| SP-22 | SP-030707 | 22.240 | 03 | - | Rel-6 | F | Clarifications GUP data access and administration | 6.1.0 | 6.2.0 | S1-031257 |
| SP-22 | SP-030707 | 22.240 | 04 | - | Rel-6 | F | Clarifications  on GUP synchronisation | 6.1.0 | 6.2.0 | S1-031258 |

## Annex 3: 3G&GSM TSs and TRs under SA1 responsibility

| Spec | Title | Ph1 | Ph2 | R96 | R97 | R98 | R99 | Rel-4 | Rel-5 | Rel-6 |
|---|---|---|---|---|---|---|---|---|---|---|
| 01.02 | General Description of a GSM Public Land Mobile Network (PLMN) | | 4.0.2 | 5.0.0 | 6.0.1 | | | | | |
| 01.48 | ISDN-based DECT/GSM interworking; Feasibility study | | | 5.0.1 | 6.0.1 | | | | | |
| 01.56 | GSM Cordless Telephony System (CTS) (Phase 1); CTS Authentication and Key Generation Algorithms Requirements | | | | | 7.0.0 | | | | |
| 01.60 | GPRS requirements | | | | 6.0.0 | | | | | |
| 02.01 | Principles of telecommunication services supported by a GSM Public Land Mobile Network(PLMN) | 3.2.0 | 4.6.0 | 5.5.0 | 6.2.0 | 7.1.0 | | | | |
| 02.02 | Bearer Services (BS) Supported by a GSM Public Land Mobile Network (PLMN) | 3.2.0 | 4.2.2 | 5.3.2 | 6.1.1 | 7.0.2 | | | | |
| 02.03 | Teleservices Supported by a GSM Public Land Mobile Network (PLMN) | 3.4.1 | 4.3.1 | 5.3.2 | 6.0.0 | 7.0.0 | | | | |
| 02.04 | General on Supplementary Services | 3.7.1 | 4.9.1 | 5.7.4 | 6.1.1 | 7.1.2 | | | | |
| 02.06 | Types of Mobile Stations (MS) | 3.2.0 | 4.5.2 | 5.2.1 | 6.1.1 | 7.0.1 | | | | |
| 02.07 | Mobile Station (MS) Features | 3.4.1 | 4.8.2 | 5.4.1 | 6.2.0 | 7.1.0 | | | | |
| 02.11 | Service Accessibility | 3.7.0 | 4.9.0 | 5.0.1 | 6.1.0 | 7.1.0 | | | | |
| 02.16 | International Mobile Station Equipment Identities (IMEI) | 3.0.1 | 4.7.1 | 5.2.0 | 6.2.0 | 7.2.0 | | | | |
| 02.20 | Collection charges | 3.0.1 | | | | | | | | |
| 02.22 | Stage 1 for personalisation of GSM ME | | | 5.4.0 | 6.0.0 | 7.0.0 | | | | |
| 02.24 | Description of Charge Advice Information (CAI) | | 4.5.0 | 5.0.1 | 6.0.1 | 7.0.1 | | | | |
| 02.30 | Man-machine Interface (MMI) of the Mobile Station (MS) | 3.9.0 | 4.13.0 | 5.7.1 | 6.1.0 | 7.1.1 | | | | |
| 02.34 | High Speed Circuit Switched Data (HSCSD); Stage 1 | | | 5.2.1 | 6.0.0 | 7.0.0 | | | | |
| 02.40 | Procedures for Call Progress Indications | 3.2.0 | 4.5.0 | 5.0.0 | 6.0.0 | 7.0.1 | | | | |
| 02.41 | Operator Determined Barring | | 4.5.2 | 5.1.1 | 6.0.0 | 7.0.0 | | | | |
| 02.42 | Network Identity and Timezone (NITZ); Service Description, Stage 1 | | | 5.1.0 | 6.0.0 | 7.0.0 | | | | |
| 02.43 | Support of Localised Service Area (SoLSA); Service description; Stage 1 | | | | | 7.3.0 | 8.0.0 | | | |
| 02.56 | GSM Cordless Telephony System (CTS), Phase 1; Service description; Stage 1 | | | | | 7.2.1 | 8.0.1 | | | |
| 02.57 | Mobile Station Application Execution Environment (MExE) Service description Stage 1 | | | | | 7.1.0 | | | | |
| 02.60 | General Packet Radio Service Stage 1 | | | | 6.3.1 | 7.5.0 | | | | |

| | Description | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 02.63 | Packet Data on Signalling channels Service (PDS); Stage 1 | | | 5.0.0 | 6.0.0 | 7.0.0 | | | |
| 02.66 | Support of Mobile Number Portability (MNP); Service description; Stage 1 | | | | | 7.1.0 | | | |
| 02.67 | Enhanced Multi-Level Precedence and Pre-emption Service (eMLPP); Stage 1 | | | 5.1.1 | 6.1.1 | 7.0.1 | | | |
| 02.68 | Voice Group Call Service (VGCS); Stage 1 | | | 5.2.1 | 6.0.1 | 7.0.2 | 8.1.0 | | |
| 02.69 | Voice Broadcast Service (VBS); Stage 1 | | | 5.2.1 | 6.0.1 | 7.0.2 | 8.1.0 | | |
| 02.71 | Location Services (LCS); Stage 1 | | | | | 7.3.0 | | | |
| 02.72 | Call Deflection Service description; Stage 1 | | | | | 7.2.1 | | | |
| 02.78 | Customized Applications for Mobile network Enhanced Logic (CAMEL); Service definition (Stage 1) | | | 5.6.0 | 6.6.1 | 7.2.0 | | | |
| 02.79 | Support of Optimal Routeing (SOR); Service definition (Stage 1) | | | 5.2.0 | 6.0.0 | 7.0.0 | | | |
| 02.81 | Line Identification Supplementary Services; Stage 1 | | 4.6.1 | 5.1.0 | 6.0.0 | 7.0.0 | | | |
| 02.82 | Call Forwarding (CF) Supplementary Services; Stage 1 | 3.6.1 | 4.5.2 | 5.0.0 | 6.0.0 | 7.0.1 | | | |
| 02.83 | Call Waiting (CW) and Call Hold (HOLD) Supplementary Services; Stage 1 | | 4.6.7 | 5.0.0 | 6.0.0 | 7.0.0 | | | |
| 02.84 | MultiParty (MPTY) Supplementary Services; Stage 1 | | 4.4.7 | 5.0.0 | 6.0.0 | 7.0.0 | | | |
| 02.85 | Closed User Group (CUG) Supplementary Services; Stage 1 | | 4.2.6 | 5.0.0 | 6.0.0 | 7.0.0 | | | |
| 02.86 | Advice of Charge (AoC) Supplementary Services; Stage 1 | | 4.1.5 | 5.0.0 | 6.0.0 | 7.0.0 | | | |
| 02.87 | User-to-User Signalling (UUS) Service Description; Stage 1 | | | | | 7.1.2 | | | |
| 02.88 | Call Barring (CB) Supplementary Services; Stage 1 | 3.6.1 | 4.4.3 | 5.0.0 | 6.0.0 | 7.0.0 | | | |
| 02.90 | Unstructured Supplementary Service Data (USSD); Stage 1 | | 4.1.1 | 5.1.0 | 6.0.0 | 7.0.0 | | | |
| 02.91 | Explicit Call Transfer (ECT) | | | 5.1.1 | 6.0.0 | 7.0.0 | | | |
| 02.93 | Completion of Calls to Busy Subcriber (CCBS) Service Description; Stage 1 | | | | 6.0.1 | 7.0.0 | | | |
| 02.95 | Support of Private Numbering Plan (SPNP); Service description; Stage 1 | | | 5.2.0 | 6.0.0 | 7.0.0 | 8.0.0 | | |
| 02.96 | Name Identification Supplementary Services; Stage 1 | | | | 6.0.1 | 7.0.0 | | | |
| 02.97 | Multiple Subscriber Profile (MSP) Service description, Stage 1 | | | | | 7.1.0 | | | |

| No. | Title | | | | | | V1 | V2 | V3 | V4 |
|---|---|---|---|---|---|---|---|---|---|---|
| 21.905 | Vocabulary for 3GPP Specifications | | | | | | 3.3.0 | 4.5.0 | 5.8.0 | 6.4.0 |
| 22.001 | Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN) | | | | | | 3.2.0 | 4.3.0 | 5.0.0 | |
| 22.002 | Circuit Bearer Services (BS) supported by a Public Land Mobile Network (PLMN) | | | | | | 3.6.0 | 4.2.0 | 5.0.0 | |
| 22.003 | Circuit Teleservices supported by a Public Land Mobile Network (PLMN) | | | | | | 3.3.0 | 4.3.0 | 5.2.0 | |
| 22.004 | General on supplementary services | | | | | | 3.3.0 | 4.2.0 | 5.0.0 | |
| 22.011 | Service accessibility | | | | | | 3.8.0 | 4.8.0 | 5.1.0 | 6.1.0 |
| 22.016 | International Mobile Equipment Identities (IMEI) | | | | | | 3.3.0 | 4.2.1 | 5.0.0 | |
| 22.024 | Description of Charge Advice Information (CAI) | | | | | | 3.0.1 | 4.0.0 | 5.0.0 | |
| 22.030 | Man-Machine Interface (MMI) of the User Equipment (UE) | | | | | | 3.4.0 | 4.1.0 | 5.0.0 | |
| 22.034 | High Speed Circuit Switched Data (HSCSD); Stage 1 | | | | | | 3.2.1 | 4.1.0 | 5.0.0 | |
| 22.038 | USIM/SIM Application Toolkit (USAT/SAT); Service description; Stage 1 | | | | | | 3.3.0 | 4.2.0 | 5.3.0 | 6.1.0 |
| 22.041 | Operator Determined Call Barring | | | | | | 3.3.1 | 4.1.0 | 5.0.0 | 6.1.0 |
| 22.042 | Network Identity and Time Zone (NITZ) service description; Stage 1 | | | | | | 3.0.1 | 4.2.1 | 5.1.0 | |
| 22.057 | Mobile Execution Environment (MExE) service description; Stage 1 | | | | | | 3.0.1 | 4.1.0 | 5.4.0 | |
| 22.060 | General Packet Radio Service (GPRS); Service description; Stage 1 | | | | | | 3.5.0 | 4.4.0 | 5.3.0 | 6.0.0 |
| 22.066 | Support of Mobile Number Portability (MNP); Stage 1 | | | | | | 3.2.0 | 4.0.0 | 5.1.0 | 6.1.0 |
| 22.067 | enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 1 | | | | | | 3.0.1 | 4.1.0 | 5.0.0 | 6.1.0 |
| 22.071 | Location Services (LCS); Stage 1 | | | | | | 3.4.0 | 4.5.0 | 5.2.0 | 6.5.0 |
| 22.072 | Call Deflection (CD); Stage 1 | | | | | | 3.0.1 | 4.0.0 | 5.0.0 | |
| 22.078 | Customized Applications for Mobile network Enhanced Logic (CAMEL); Service description; Stage 1 | | | | | | 3.9.0 | 4.5.0 | 5.11.0 | 6.2.0 |
| 22.079 | Support of optimal routeing; Stage 1 | | | | | | 3.0.1 | 4.0.0 | 5.0.0 | |
| 22.081 | Line Identification supplementary services; Stage 1 | | | | | | 3.2.0 | 4.1.0 | 5.0.0 | |
| 22.082 | Call Forwarding (CF) Supplementary Services; Stage 1 | | | | | | 3.0.1 | 4.2.0 | 5.0.0 | |
| 22.083 | Call Waiting (CW) and Call Hold (HOLD) supplementary services; Stage 1 | | | | | | 3.0.1 | 4.1.0 | 5.0.0 | |
| 22.084 | MultiParty (MPTY) supplementary service; Stage 1 | | | | | | 3.0.1 | 4.1.0 | 5.0.0 | |

| No. | Title |  |  |  |  |  |  | R99 | Rel-4 | Rel-5 | Rel-6 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22.085 | Closed User Group (CUG) supplementary services; Stage 1 |  |  |  |  |  |  | 3.1.0 | 4.1.0 | 5.0.0 |  |
| 22.086 | Advice of Charge (AoC) supplementary services; Stage 1 |  |  |  |  |  |  | 3.1.0 | 4.0.0 | 5.0.0 |  |
| 22.087 | User-to-user signalling (UUS); Stage 1 |  |  |  |  |  |  | 3.1.0 | 4.0.0 | 5.0.0 |  |
| 22.088 | Call Barring (CB) supplementary services; Stage 1 |  |  |  |  |  |  | 3.0.2 | 4.1.0 | 5.0.0 |  |
| 22.090 | Unstructured Supplementary Service Data (USSD); Stage 1 |  |  |  |  |  |  | 3.1.0 | 4.0.0 | 5.0.0 |  |
| 22.091 | Explicit Call Transfer (ECT) supplementary service; Stage 1 |  |  |  |  |  |  | 3.1.0 | 4.0.0 | 5.0.0 |  |
| 22.093 | Completion of Calls to Busy Subscriber (CCBS); Service description, Stage 1 |  |  |  |  |  |  | 3.0.1 | 4.0.0 | 5.0.0 |  |
| 22.094 | Follow Me service description - Stage 1 |  |  |  |  |  |  | 3.1.0 | 4.1.0 | 5.0.0 |  |
| 22.096 | Name identification supplementary services; Stage 1 |  |  |  |  |  |  | 3.0.1 | 4.0.0 | 5.0.0 |  |
| 22.097 | Multiple Subscriber Profile (MSP) Phase 1; Service description - Stage 1 |  |  |  |  |  |  | 3.2.0 | 4.1.0 | 5.0.0 |  |
| 22.100 | UMTS Phase 1 |  |  |  |  |  |  | 3.7.0 |  |  |  |
| 22.101 | Service aspects; Service principles |  |  |  |  |  |  | 3.15.0 | 4.8.0 | 5.11.0 | 6.5.0 |
| 22.105 | Services and service capabilities |  |  |  |  |  |  | 3.10.0 | 4.3.0 | 5.2.0 | 6.2.0 |
| 22.115 | Service Aspects Charging and billing |  |  |  |  |  |  | 3.3.0 | 4.0.0 | 5.3.0 | 6.2.0 |
| 22.121 | Service aspects; The Virtual Home Environment; Stage 1 |  |  |  |  |  |  | 3.3.1 | 4.1.1 | 5.3.1 |  |
| 22.127 | Service Requirement for the Open Services Access (OSA); Stage 1 |  |  |  |  |  |  |  | 4.4.0 | 5.5.0 | 6.3.0 |
| 22.129 | Handover requirements between UTRAN and GERAN or other radio systems |  |  |  |  |  |  | 3.6.0 | 4.4.0 | 5.2.0 | 6.0.0 |
| 22.135 | Multicall; Service description; Stage 1 |  |  |  |  |  |  | 3.4.0 | 4.2.0 | 5.0.0 |  |
| 22.140 | Multimedia Messaging Service (MMS);  Stage 1 |  |  |  |  |  |  | 3.1.0 | 4.3.0 | 5.4.0 | 6.3.0 |
| 22.141 | Presence service; Stage 1 |  |  |  |  |  |  |  |  |  | 6.2.0 |
| 22.146 | Multimedia Broadcast/Multicast Service (MBMS); Stage 1 |  |  |  |  |  |  |  |  |  | 6.2.0 |
| 22.174 | Push service; Stage 1 |  |  |  |  |  |  |  |  |  | 6.2.0 |
| 22.226 | Global text telephony (GTT); Stage 1: Service description |  |  |  |  |  |  |  |  | 5.2.0 |  |
| 22.228 | Service requirements for the Internet Protocol (IP) multimedia core network subsystem; Stage 1 |  |  |  |  |  |  |  |  | 5.6.0 | 6.4.0 |
| 22.233 | Transparent end-to-end packet-switched streamng service; Stage 1 |  |  |  |  |  |  |  |  | 5.0.0 | 6.3.0 |
| 22.240 | Service requirements for 3GPP Generic User Profile (GUP); Stage 1 |  |  |  |  |  |  |  |  |  | 6.1.0 |

| No. | Title | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22.242 | Digital Rights Management (DRM); Stage 1 | | | | | | | | | | 6.2.0 |
| 22.243 | Speech recognition framework for automated voice services; Stage 1 | | | | | | | | | | 6.4.0 |
| 22.246 | Multimedia Broadcast/Multicast Service (MBMS) teleservice requirements | | | | | | | | | | 1.0.0 |
| 22.250 | IP Multimedia Subsystem (IMS) Group Management; Stage 1 | | | | | | | | | | 6.0.0 |
| 22.340 | IP Multimedia Subsystem (IMS) messaging; Stage 1 | | | | | | | | | | 6.1.0 |
| 22.800 | IP Multimedia Subsystem (IMS) subscription and access scenarios | | | | | | | | | | 2.0.0 |
| 22.934 | Feasibility study on 3GPP system to Wireles Local Area Network (WLAN) interworking | | | | | | | | | | 6.2.0 |
| 22.940 | IP Multimedia Subsystem (IMS) messaging; Stage 1 | | | | | | | | | | 6.0.0 |
| 22.944 | Service requirements for UE functionality split | | | | | | | | | | 5.1.0 | |
| 22.949 | Study on a generalized privacy capability | | | | | | | | | | 0.3.0 |
| 22.950 | Priority service feasibility study | | | | | | | | | | 6.2.0 |
| 22.951 | Service aspects and requirements for network sharing | | | | | | | | | | 6.1.0 |
| 22.952 | Priority service guide | | | | | | | | | | 1.0.0 |
| 22.971 | Automatic establishment of roaming relationships | | | | | | 3.1.1 | | | | |
| 22.975 | Advanced addressing | | | | | | 3.1.0 | | | | |
| 22.977 | Feasibility study for speech-enabled services | | | | | | | | | | 6.0.0 |
| 42.043 | Support of Localised Service Area (SoLSA); Service description; Stage 1 | | | | | | | | 4.0.0 | 5.0.0 | |
| 42.056 | GSM Cordless Telephony System (CTS), Phase 1; Service description; Stage 1 | | | | | | | | 4.0.0 | 5.0.0 | |
| 42.068 | Voice Group Call Service (VGCS); Stage 1 | | | | | | | | 4.1.0 | 5.0.1 | |
| 42.069 | Voice Broadcast Service (VBS); Stage 1 | | | | | | | | 4.1.0 | 5.0.1 | |