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TSG SA1 STATUS REPORT

1	General Overview of Progress	2
2	External Liaisons	2
3	Change Requests for Rel-4 or earlier	2
3.1	Cleanup of USAT requirements (22.038)	2
3.2	Emergency calls in data only network (22.101)	2
3.3	Update to vocabulary document (21.905)	3
3.4	Alignment of NITZ with implementation (22.042)	3
4	Change Requests for Rel-5	3
4.1	Charging requirements in an NMP environment (22.066, 22.115)	3
4.2	Tidy-up of Subscriber Identification requirements (22.101)	4
4.3	SMS on GPRS and GSM, charging aspect (22.115)	4
4.4	Determination of MMS support in the terminal (22.140)	4
5	Change Requests for Rel-6	5
5.1	Abbreviations and Acronyms (21.905)	5
5.2	Network selection in shared networks (22.011)	5
5.3	WLAN (22.011, 22.041)	5
5.4	(U)SIM toolkit commands for MMS (22.038)	5
5.5	Priority Service Alignment (22.067)	6
5.6	Location Services (22.071)	6
5.7	Emergency Call requirements (22.101)	6
5.8	Service Based Local Policy Requirements (22.105)	7
5.9	Removal of features from OSA (22.127)	7
5.10	Multimedia Messaging (22.140)	7
5.11	IMS (22.228)	8
5.12	Speech recognition framework for automated voice services (22.243)	8
5.13	Routing of Emergency Calls based on Geographic Coordinates	9
6	New TSs/TRs	9
7	WIs from SA1	9
8	Open Issues	9
9	Other Issues	9
10	Meetings of SA1	10
10.1	Meetings since last SA	10
10.2	Planned meetings	10
	Annex 1: Documents provided to this Plenary	11
	Annex 2: CRs provided to this Plenary	13
	Annex 3: 3G&GSM TSs and TRs under SA1 responsibility	15

1 General Overview of Progress

The TSG_SA_WG1#20 Plenary Meeting was held in Seoul, South Korea from the 7th to 11th April 2003. It was chaired by Mr Michele Zarri (T-Mobil) and the secretary was Mr Michael Clayton from the MCC. The host was Samsung.

2 External Liaisons

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

Document Number	Title	To	Copy	Sent
S1-030468	LS on Cleanup of SAT/USAT requirements 3GPP TS 22.038	GSMA SCaG	T3	15/04/2003
S1-030470	LS on (U)SIM Toolkit originated emergency calls	T3	T, CN1, SCP	15/04/2003
S1-030492	Reply to LS on Roaming awareness to BARG	GSMA CPWP	SA2, SA5, T2, GSMA SERG, GSMA TADIG	15/04/2003
S1-030535	Interworking to MMS/SMS from I-WLAN	T2, SA2, CN4	OMA MAG	15/04/2003
S1-030544	LS on MMS on SIM card	T2, T3	GSMA SCaG	15/04/2003
S1-030546	Request for Information Regarding WLAN Interworking Impacts to UICC applications	T3, SA3	SA2, EP SCP	15/04/2003
S1-030559	Privacy and Security Requirements within GSM/UMTS Devices	SA3, GSM SerG LBS	OMAapp, OMAloc, OMAReq	15/04/2003

3 Change Requests for Rel-4 or earlier

3.1 Cleanup of USAT requirements (22.038)

At the New Orleans plenary of SA (#18), SA1 presented document SP-020647 containing release 99/4/5/6 CRs to 22.038 on USAT requirements (deletion and re-introduction). There was a concern raised over the CRs and it was felt that this should be returned for further analysis by SA WG1 and T WG3. The response from T3 was received at the last meeting of SA1 together with the updated CRs.

There was some discussion regarding the change: It "may" rather than "shall" be possible for the user to activate and deactivate the USIM/SIM application execution environment; in this case the ME shall initiate a new (U)SIM session. Basically, there were arguments both ways. Therefore, the CR for R99, Rel-4 and Rel-5 were agreed in SA1 without any changes and they are presented for approval in document SP-030238.

It should be noted that the changes remove the need for traceability. This was put in since it is possible that the SIM Toolkit can change the phone number being dialled or send an SMS without the user knowing. Therefore, traceability was introduced to allow customer services to know when this is happening. It was decided in SA1 to keep the text as it is and remove the requirement for traceability.

3.2 Emergency calls in data only network (22.101)

SA1 has been in communication with CN1 regarding the issue of R99 and later emergency calls when attached to data only network. CN1 is asking for the requirement in 8.1 from R99 onwards to be removed. Furthermore, after the removal of cell bar qualify criteria CBQ2 from the specifications it is not possible to indicate Compact GSM data only network towards the mobile any more.

It was noted that this is a known problem and has been for some time. In addition, there was a comment that any attempt to fulfil it was found not to be possible, but only now has

the inconsistency been addressed in light of making the alignment.

The CR 22.101 R99, together with CRs to Rel-4 and Rel-5 are provided in document SP-030239.

The above CRs above fulfil the requirements of both CN1 and SA2. A liaison statement to inform the groups has been sent.

3.3 Update to vocabulary document (21.905)

At the last SA1 meeting, a liaison statement was received from the ITU with comments to Rec. Q.1741.2 approval relevant to 3GPP. This was seen at SA #19 and was passed to SA1. The CR to correct the differences is provided in document SP-030240 for approval.

Equivalent changes to Rel-5 and Rel-6 are also provided.

3.4 Alignment of NITZ with implementation (22.042)

A Rel-4 CR to 22.042 on Network Identity and TimeZone (NITZ) was provided to SA1 to correct an editorial mistake. In it, the scope of NITZ had been reduced to be applicable only to the CS domain. However, NITZ is applicable to the CS and PS domain. With this change, 22.042 and 24.008 are now aligned.

The CRs to Rel-4 and Rel-5 are provided in document SP-030241 for approval.

4 Change Requests for Rel-5

The following CRs are for Release 5.

4.1 Charging requirements in an MNP environment (22.066, 22.115)

SA1 has received a liaison statement on MNP for Pre-paid Subscribers from CN4, in which a problem has been highlighted with the charging associated with pre-paid subscribers in the MNP environment. With the introduction of MNP, it is not possible for operators to charge calls from prepaid subscribers in the MNP environment consistently and in the same way as for calls from other subscribers. This is because it is not possible to identify the operator domain of the called subscriber for prepaid services if a number has been ported.

CN4 was proposing to introduce new charging methods, which it understood to be covered by existing MNP requirements. However, in SA1 there was a proposal introduce some requirements in the stage 1.

There are two issues; should the CRs be for Rel-5 and are the requirements aligned between the CRs and CN4 interpretations of what the requirements are. A liaison statement has been sent back to CN4 with a table listing what is essential in Rel-5. In SA1 it was asked of the operators if there was anything else since, once this is set, there is no chance to add to it later. At least one operator indicated that this was sufficient.

The CRs are provided in document SP-030242 for approval.

A similar change was made also to 22.115. Operators need to be able to apply different tariffs to calls and short messages established/sent by their subscribers while roaming in their Home PLMN depending on the national called subscriber's Home PLMN rather than on the national called subscriber's MSISDN. This differentiation is needed in the case,

where the called subscriber's MSISDN may have been ported by Mobile Number Portability.

The CRs are presented in document SP-030243 for approval.

4.2 Tidy-up of Subscriber Identification requirements (22.101)

SA1 has also addressed 22.101 in light of requirements on subscriber identification to align with current implementations. Chapter 11.3 of TS 22.101 is very outdated and confusing. Text was simplified and corrected to reflect the current status. This issue was noted after CR (SP-020651) was approved, which incorrectly deleted SIM references from several places in this chapter.

- The requirements in chapter 11 (Numbering Principles), that relate to identification requirements rather than to numbering principles have been shifted to a new chapter 12 (Identification Requirements). These are 11.3 (User / USIM identification), 11.4 (Terminal Identification) and 11.5 (Home Environment / Serving Network Identification)
- The sub-chapter "User / USIM identification" has been renamed "Subscriber Identification"
This sub-chapter has been tidied up to clarify the requirements contained therein
- The requirement for the network to be able to support UEs containing a SIM has been re-established (however, UE support of SIM is optional).

The Rel-5 and equivalent Rel-6 CRs are provided for approval in document SP-030244.

4.3 SMS on GPRS and GSM, charging aspect (22.115)

At SA #19 a CR was provided regarding support of SMS over GPRS. This CR proposed a workaround for the behaviour of a mobile attempting to send SMS over GPRS in case this attempt fails, either due to a direct failure indication or rejection from the network, or due to the complete lack of a response (SP-030013).

With the approval of this, SA1 received an input to express the charging aspect more clearly.

There were some issues in SA1 as to whether this is a commercial issue and if the customer has any control of the bearer used for SMS. After several revisions SA1 agreed a CR for presentation to SA for approval in document SP-030245. There is no release 6 since, hopefully, by Rel-6 operators will have implemented SMS over GPRS.

4.4 Determination of MMS support in the terminal (22.140)

A proposal for a new requirement was received by SA1 to change 22.140 in order to improve the user experience of the service. The change is to add a requirement that MMS is able to determine if the recipient's terminal is MMS capable or not ("legacy terminal") before submitting the MMS.

These CRs were approved in Seoul, but were considered conditional upon T2 agreeing to identify an appropriate technical solution. The SA1 view was that if a solution was not identified for Release 5, then the Release 6 CR would not be implemented either, as it was felt by the time Release 6 terminals came onto the market most devices in circulation would by then be MMS capable and hence the problem the CR is trying to solve would have largely gone away.

T2SWG3 indicated to SA1 informally during the San Diego SA1 SWG meeting that there will not be a solution to this developed for Release 5 and so it is possible these CRs may be withdrawn.

The Rel-5 and subsequent Rel-6 CRs are provided in document SP-030246 for approval.

5 Change Requests for Rel-6

The following sections contain CRs to release 6.

5.1 Abbreviations and Acronyms (21.905)

A simple change is provided from SA1 to 21.905. The Abbreviation and Acronym TS does not contain the definition and acronym of 3GPP Generic User Profile that is being developed for Rel6.

The change request is provided in document SP-030247 for approval.

5.2 Network selection in shared networks (22.011)

In shared networks a radio access network can be part of more than one PLMN and this begs the question how network selection is handled in such a network.

Network sharing is transparent to the user and so the UE needs to be able to indicate potential PLMNs to the user, and the UE shall support network selection among those PLMNs, as in non-shared networks.

The CR to incorporate this change is provided in document SP-030248.

5.3 WLAN (22.011, 22.041)

SA1 is continuing to ensure that the requirements for WLAN, which are provided in the feasibility study (22.934), are incorporated into the TSs of SA1. To this end, SA1 is providing two CRs relating to WLAN.

Network Selection requirements for WLAN Interworking (22.011)

In the first CR, a complete section on WLAN/Network Sharing interworking is introduced.

ODB in WLAN – Requirement (22.041)

In the second, the interaction between ODB and WLAN is dealt with. ODB provides a level of protection for network operators against fraudulent users and also the capability to selectively bar subscribers from services. With WLAN interworking being used to access services the same level of control should be made available to the operators for handling subscribers connecting over WLAN. Currently this is not provided.

The two CRs were provided in document SP-030249 for approval, but subsequently an error was found in the front page of the CR and it was revised to SP-030327, which is presented instead for approval.

5.4 (U)SIM toolkit commands for MMS (22.038)

A minor change to 22.038 on USIM Toolkit was provided to the last SA1. The requirement is to add the USIM as an external interface for MMs. This will enable the use of the UICC as a removable media to transfer MMs between devices.

The CR to do this is provided in document SP-030250.

5.5 Priority Service Alignment (22.067)

During the last SA1, a discrepancy was noticed between the stage 1 and stage 2 of enhanced Multi-Level Precedence and Pre-emption service (eMLPP). In the stage 2, the standard can optionally support priority level B for subscription. The change to the stage 1 clarifies the text.

It is presented for approval in document SP-030251.

5.6 Location Services (22.071)

Three change requests are presented for approval to SA from SA1.

The first deals with codeword generation. In the current specification, the Target UE user provides the codeword of each Requestor/LCS client to the LCS server, in this case he has to memorize and manage all the codewords to avoid repetition when he wants to generate a new one to another Requestor/LCS client. If the Target UE user has quite a few Requestors/LCS clients, he cannot manage the codewords conveniently. On the other hand, the procedure of the codeword distribution is not efficient. To deal with this, codeword generation by the network or UE is introduced.

The next CR deals with IMS. LCS has already been recognized as a part of IMS, but to enable this the LCS Client should be able to target the UE also by using a SIP URL. Therefore, a reference to SIP URL is added to the list of supported identification methods of a target UE. Also, two typos were fixed: MISISDN -> MSISDN and UEISDN -> MSISDN.

Finally, the requirement regarding 'Query, Cancel of activated location requests for the Target UE' is no longer to be considered an essential requirement. Therefore, it is changed to an option.

The CRs above are provided in document SP-030252 for approval.

5.7 Emergency Call requirements (22.101)

The current specification does not clearly spell out actions to be taken by the UE when an emergency call is attempted. Because of the possibility of different configurations of network capabilities, a clear hierarchy of UE requirements is provided. Hence, the requirements for actions for a UE to make an emergency call for various scenarios are clarified in the form of a table.

There was some discussion in SA1 on the what is required if there is a lack of PS service; in this case the UE should try to make the call in the CS domain. Since there were no operators who had a problem with the solution, and since this is Rel-6, then it was decided to go with the text as it stood.

The change request is presented in document SP-030253 for approval.

Other issues on emergency calls

SA1 has received liaison statements from CN1 and SA2 on this issue. The liaison statement from CN1 also included a proposal for an update of the WID for emergency call enhancements for IP & PS based calls. SA1 believe the above CR and a liaison statement in S1-030539 cover the actions for SA1. It was identified that there are no connections

with the work in SA1 and the proposed WID. This has been communicated to the chairman of CN1 and SA2.

5.8 Service Based Local Policy Requirements (22.105)

In SA1 a proposal was provided that related to QoS and charging. The aim is to provide flexible control of resources in the PS Domain thus ensuring that the QoS provided, and charged for, is in line with that authorized by the service. A number of contributions (S1-030114, S1-021930) have been presented at previous meetings that listed requirements for flexible control of resources in the PS Domain. Any Service Based Local Policy control provided within the PLMN should be general enough to be used with all services provided over the PS Domain. Additionally, the work on 3G-WLAN interworking has a scenario where the WLAN may be used to access PS services (scenario 3), if supported, the same requirements linking the access QoS control to the result of application negotiation and to subscription would apply.

In SA1 there was some debate as to whether this is best put into 22.101, 22.060 or 22.105. In the end, it was decided to put this into 22.105 since this TS is more generic than GPRS.

It is provided for approval in document S1-030254.

5.9 Removal of features from OSA (22.127)

A number of features were introduced into OSA and which have not attracted any input to the stage 2 and stage 3 in several successive SA2 and CN5 meetings. It can, therefore, be concluded that there is no interest in this feature from the OSA community. In order for CN5 to focus their time on completing other OSA features in release 6, it is proposed that these requirements are deleted. They are: Generic Network interface function, Information transfer feature and Information services feature.

The CRs to do this are provided in document SP-030255 for approval.

5.10 Multimedia Messaging (22.140)

A number of change requests are presented to 22.140 relating to MMS.

The first is simple and adds requirements for DRM to MMS. This is done by adding a reference to the OMA DRM specification and adding DRM requirements to the Multimedia Messaging Management section.

The second adds requirements for use of a standardized interface to transfer billing records to the MMS (MMSC and Billing System).

The third adds a reference to the GUP specification and adds a requirements to the User Profile section that a standardized user profile be used. That profile must conform to GUP whenever possible.

The fourth deals with blacklisting. In this CR, the capability for the user to create and manage a list of addresses from which messages are not submitted to the user is added.

The CRs are provided in document SP-030256.

Also related to MMS, SA1 has held an MMS SWG since the meeting of SA1 #20 and this has resulted in some additional CRs that have been agreed by email approval. These are:

SA1 held a SWG meeting after the plenary which resulted in some additional CRs. These were approved by email.

Document SP-030257 contains on CRs to 22.140-034 on Error Messages in MMS. Most error messages that a current MM user will see will be triggered from the network and displayed by the terminal MMS client or WAP client. In order to improve consistency across different terminal types and to improve the usability for the end user, the error messages should be configurable by the operator. It has been confirmed that free text field is defined in 23.140.

Document SP-030258 also contains two CRs, but to 22.140 and 22.101 both of which relate to MMS information on the USIM. Operators and end users alike could benefit from storing generic information that can then be accessed and reused on the USIM. For example, multimedia messages (or elements of a multimedia message) may be stored on the USIM and reused. (See also CR to 22.038-013 in SP-030250.) This was not agreed over email and so has been withdrawn.

5.11 IMS (22.228)

There are two changes to 22.228.

In the future, it is very likely that a subscriber will own more than one terminal equipment capable of utilizing various IMS services. To accommodate this requirement, the IMS subscription should support the possibility to attach multiple UEs to a single service subscription. Therefore, the requirement is added to define Multiple UEs for IMS service subscription.

In order to enable various kinds of services, that involve-conference like functions, the IMS needs to be able to support a minimum set of user requirements for conference handling. While the appendix of 22.228 mentions multiple examples of conference-like services the basic user requirements are still missing in the document. Therefore, the definition of "conference" and "focus of a conference" is introduced and user requirements for the handling of conferences are stated in a new sub-clause.

The CRs are provided in document SP-030259 for approval.

5.12 Speech recognition framework for automated voice services (22.243)

There were two agreed CRs to 22.243 on Speech Recognition.

The first is in response to a liaison statement from SA4 (S1-030356) informing SA1 that the required source datarate can vary depending on the channel and can be more or less than the 9.6 kbit/s which is stated in the current document 22.243 ver. 6.2.0. Therefore, the reference to uplink bandwidth of 9.6 kbit/s is being removed from sentence in chapter 5.

The second, also in response to an liaison statement from SA4 (S1-030356) includes straming and interactive class of service. The liaison statement had indicated that even though SA1 has asked SA4 to recommend a speech codec for conversational class of service it is would be valuable to extend the service to also include straming and interactive class of service. This point was also noted by TSG GERAN in their LS to SA4.

The CRs are provided in document SP-030260.

5.13 Routing of Emergency Calls based on Geographic Coordinates

As indicated above, SA1 held a SWG meeting after the SA1 plenary. Out of this came a number of CRs that were approved by email. Four of these CRs are dealt with above (See 5.10). The last is to 22.071 and relates to Routing of Emergency Calls based on Geographic Coordinates.

Resulting from what appears to be a regulatory requirement, accurate routing of emergency calls to the correct Emergency Service Provider is required. Enabling routing based on the geographical coordinates of the calling party is added, there, that will increase the probability of more accurate routing.

The CR is presented in document SP-030322 for approval.

6 New TSs/TRs

SA1 has no TSs or TRs to present for information/approval.

7 WIs from SA1

SA1 has no WIs to present for approval.

8 Open Issues

SA1 has one open issue that requires resolution.

SA1 received a proposal to include reconstructed speech as an output mechanism for Speech Recognition.

TS 22.243 has already identified that speech/audio output should be provided back to the user for speech enabled services. This proposed change clarifies the details how audio output can be provided by adding reconstructed speech as an output mechanism.

After some initial discussion in SA1, there were two objections by two companies. One objected since it could add delays in the selection process and that this is a spin-off discussion being held in SA4 and this could confuse the issue. The other objection indicated that these use cases are not sufficiently compelling.

However, there were other companies who supported it. An additional comment was that, if the use cases were required by some operators and not by others and there is no harm, then there is no reason not to add them.

After some significant discussion, there were sustained objections by Motorola (it will introduce delays in the selection process) and Orange (the use cases are not sufficiently compelling to cause a new requirement). It was decided to send this issue to Plenary for a decision even though there was no agreement in SA1. The CR 22.243-006 is provided in document SP-030261.

9 Other Issues

At SA #19, it was announced that the second term as vice chairman for Tommi Kokkola was due to end. Since he had had two terms in office, he was only eligible to stand if unopposed.

Prior to meeting #20, two nominations were received; Mr Michel Grech (Lucent) and Mr Paul Carpenter (RIM).

A vote was held during the meeting, but the results were close and there was not a clear majority. Both candidates were informed of this and, prior to knowing the results, both agreed that whomever had the fewer votes, would retire. Since the vote was marginally in favour of Mr Carpenter, Mr Grech announced he would not stand for a second round. Therefore, Mr Carpenter from RIM was elected by acclamation.

10 Meetings of SA1

10.1 Meetings since last SA

The following meetings have been held since SA #19.

Meeting	Date	Place	Host
SWGs IMS	18 – 20 February 2003,	Turin, Italy	TIM
SWGs Priority	6th March 2003	Conference call	
SA1#20	07 - 11 April 2003,	Seoul, Korea,	hosted by Samsung
SA1 SWGs #21	12 - 16 May 2003,	San Diego,USA,	North American Friends

10.2 Planned meetings

SA1 has the following meetings scheduled, so far.

SA1 Plenary

SA1#21	07 - 11 July 2003,	Sophia Antipolis, hosted by ETSI
SA1#22	27 - 31 October 2003,	Asia, hosted by NEC et.al.

SA1 SWGs

SA1 SWGs #22	25 - 29 August 2003,	(Cancelled)
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Annex 1: Documents provided to this Plenary

Tdoc	Title	Agenda
SP-030236	Presentation of SA1 to SA #19	7.1.1
SP-030237	Status report of SA1 to SA #19	7.1.1
SP-030238	CRs to 22.038 on Cleanup of USAT requirements (R99/Rel4/5)	7.1.3
SP-030239	CR to 22.101 on Emergency calls in data only network (R99/Rel4/5)	7.1.3
SP-030240	CRs to 21.905 on Update to vocabulary document (Rel-4/5/6)	7.1.3
SP-030241	CR to 22.042 on Alignment of NITZ with implementation (Rel-4/5)	7.1.3
SP-030242	CRs to 22.066 on Charging requirements in an NMP environment (Rel-5/6)	7.1.3
SP-030243	CRs to 22.115 on Charging requirements in an NMP environment (Rel-5/6)	7.1.3
SP-030244	CR to 22.101 on Tidy-up of Subscriber Identification requirements (Rel-5/6)	7.1.3
SP-030245	CRs to 22.115 on SMS on GPRS and GSM, charging aspect (Rel-5)	7.1.3
SP-030246	CR to 22.140 on MMS support on the USIM (Rel-5/6)	7.1.3
SP-030247	CR to 21.905 on 3GPP Generic User Profile (Rel-6)	7.1.3
SP-030248	CR to 22.011 on Network selection in shared networks (Rel-6)	7.1.3
SP-030249	CRs to TS 22.011 and 22.041 on WLAN (Rel-6)	7.1.3
SP-030250	CRs to 22.038 to (U)SIM toolkit commands for MMS (Rel-6)	7.1.3
SP-030251	CR to 22.067 on Priority Service Alignment (Rel-6)	7.1.3
SP-030252	CRs to 22.071 on various subjects (Rel-6)	7.1.3
SP-030253	CRs to 22.101 on Emergency Call requirements (Rel-6)	7.1.3
SP-030254	CR to 22.105 on Service Based Local Policy Requirements (Rel-6)	7.1.3
SP-030255	CR to 22.127 on Removal of features from OSA (Rel-6)	7.1.3
SP-030256	CRs to 22.140 on Multimedia Messaging (Rel-6)	7.1.3
SP-030257	CRs to 22.140 on Multimedia Messaging from email approval	7.1.3

	(Rel-6)	
SP-030258	CRs to 22.140 and 22.101 on storing MMS messages on the USIM (Withdrawn)	7.1.3
SP-030259	CRs to 22.228 on IMS (Rel-6)	7.1.3
SP-030260	CR to 22.243 on Speech recognition framework for automated voice services (Rel-6)	7.1.3
SP-030261	CR to 22.243 on reconstructed speech (Rel-6)	7.1.2
SP-030322	CR to 22.071 on Routing of Emergency Calls based on Geographic Coordinates	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-20	SP-030247	21.905	047	-	Rel-6	B	Addition of the definition and acronym of 3GPP Generic User Profile	6.2.0	6.3.0	S1-030391
SP-20	SP-030240	21.905	048	-	Rel-4	F	Correction of acronyms in TR21.905	4.4.0	4.5.0	S1-030423
SP-20	SP-030240	21.905	049	-	Rel-5	A	Correction of acronyms in TR21.905	5.6.0	5.7.0	S1-030575
SP-20	SP-030240	21.905	050	-	Rel-6	A	Correction of acronyms in TR21.905	6.2.0	6.3.0	S1-030576
SP-20	SP-030249	22.011	051		Rel-6	B	Network Selection requirements for WLAN Interworking	5.1.0	6.0.0	S1-030504
SP-20	SP-030248	22.011	052		Rel-6	B	Network selection in shared networks	6.0.0	6.1.0	S1-030532
SP-20	SP-030238	22.038	009		R99	F	Clean up of (U)SAT requirements	3.2.0	3.3.0	S1-030464
SP-20	SP-030238	22.038	010		Rel-4	A	Clean up of (U)SAT requirements	4.1.0	4.2.0	S1-030465
SP-20	SP-030238	22.038	011		Rel-5	A	Clean up of USAT requirements	5.2.0	5.3.0	S1-030466
SP-20	SP-030250	22.038	013		Rel-6	B	MMS support on the card	5.2.0	6.0.0	S1-030552
SP-20	SP-030249	22.041	009		Rel-6	B	ODB in WLAN - Requirement	6.0.0	6.1.0	S1-030490
SP-20	SP-030241	22.042	004	-	Rel-4	F	Alignment of TS 22.042 (NITZ) with implementation in TS 24.008	4.1.0	4.2.0	S1-030377
SP-20	SP-030241	22.042	005	-	Rel-5	A	Alignment of TS 22.042 (NITZ) with implementation in TS 24.008	5.0.0	5.1.0	S1-030378
SP-20	SP-030242	22.066	005		Rel-5	F	Charging Requirements in an MNP environment	5.0.0	5.1.0	S1-030568
SP-20	SP-030242	22.066	006	-	Rel-6	A	Charging Requirements in an MNP environment	6.0.0	6.1.0	S1-030569
SP-20	SP-030251	22.067	005	-	Rel-6	D	Changes to align with 23.067 for Priority Service	6.0.0	6.1.0	S1-030381
SP-20	SP-030252	22.071	050	-	Rel-6	B	Introduction of codeword generation by network or UE	6.3.0	6.4.0	S1-030526
SP-20	SP-030252	22.071	051	-	Rel-6	B	LCS in IMS	6.3.0	6.4.0	S1-030392
SP-20	SP-030252	22.071	052		Rel-6	F	Clarification of requirement regarding 'Query, Cancel of activated location requests for the Target UE'	6.3.0	6.4.0	S1-030557
SP-20	SP-030322	22.071	053		Rel-6	B	Routing of Emergency Calls based on Geographic Coordinates	6.3.0	6.4.0	S1-030650
SP-20	SP-030253	22.101	120		Rel-6	F	Clarification of UE Requirements for Emergency Calls	6.3.0	6.4.0	S1-030538
SP-20	SP-030239	22.101	121		R99	F	Correction to R99 emergency calls when attached to data only networks	3.13.0	3.14.0	S1-030414
SP-20	SP-030239	22.101	122		Rel-4	A	Correction to Rel-4 emergency calls when attached to data only networks	4.6.0	4.7.0	S1-030415
SP-20	SP-030239	22.101	123	-	Rel-5	A	Correction to Rel-5 emergency calls when attached to data only networks	5.9.0	5.10.0	S1-030416
SP-20	SP-030244	22.101	124	-	Rel-5	F	Alignment of Subscriber Identification requirements to current implementation	5.9.0	5.10.0	S1-030540
SP-20	SP-030244	22.101	125	-	Rel-6	A	Alignment of Subscriber Identification	6.3.0	6.4.0	S1-030541

							requirements to current implementation			
SP-20	SP-030254	22.105	042		Rel-6	B	Service Based Local Policy Requirements	6.1.0	6.2.0	S1-030566
SP-20	SP-030245	22.115	011	-	Rel-5	F	SMS on CS and PS domain, charging aspect	5.2.0	5.3.0	S1-030565
SP-20	SP-030243	22.115	012		Rel-5	F	Charging Requirements in an MNP environment	5.2.0	5.3.0	S1-030571
SP-20	SP-030243	22.115	013	-	Rel-6	A	Charging Requirements in an MNP environment	6.0.0	6.1.0	S1-030564
SP-20	SP-030255	22.127	065		Rel-6	C	Removal of Generic Network Interface Function from OSA Release 6	6.2.0	6.3.0	S1-030529
SP-20	SP-030255	22.127	066		Rel-6	C	Removal of Information Transfer feature from OSA Release 6	6.2.0	6.3.0	S1-030530
SP-20	SP-030255	22.127	067		Rel-6	C	Removal of Information Services functions from OSA Release 6	6.2.0	6.3.0	S1-030531
SP-20	SP-030256	22.140	026	-	Rel-6	B	Add DRM Requirement to 22.140	6.1.0	6.2.0	S1-030493
SP-20	SP-030256	22.140	027		Rel-6	B	Add a Standardized Charging Record Interface Requirement to 22.140	6.1.0	6.2.0	S1-030494
SP-20	SP-030256	22.140	028		Rel-6	B	Add a Standardized User Profile to 22.140	6.1.0	6.2.0	S1-030551
SP-20	SP-030256	22.140	029		Rel-6	B	Addition of blacklisting capability in the the multimedia messaging profiles	6.1.0	6.2.0	S1-030536
SP-20	SP-030246	22.140	030		Rel-5	F	Determination of MMS support in the terminal	5.4.0	5.5.0	S1-030553
SP-20	SP-030246	22.140	031		Rel-6	A	Determination of MMS support in the terminal	6.1.0	6.2.0	S1-030554
SP-20	SP-030257	22.140	034	-	Rel-6	F	Error Messages in MMS	6.1.0	6.2.0	S1-030638
SP-20	SP-030259	22.228	019		Rel-6	B	Multiple UEs in IMS service subscription	6.2.0	6.3.0	S1-030522
SP-20	SP-030259	22.228	020	-	Rel-6	B	Addition of requirements to IMS to enable conference-like services	6.2.0	6.3.0	S1-030523
SP-20	SP-030260	22.243	004	-	Rel-6	F	UE and network capabilities	6.2.0	6.3.0	S1-030431
SP-20	SP-030260	22.243	005	-	Rel-6	C	Addition of Streaming and interactive QoS	6.2.0	6.3.0	S1-030432

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 Description				6.3.1	7.5.0				
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-			5.1.1	6.1.1	7.0.1				

	emption Service (eMLPP); Stage 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			
02.72	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 Routing (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 Subscriber (CCBS) Service Description; Stage 1				6.0.1	7.0.0				
02.94	Follow Me Service description; Stage 1						8.0.0			
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				
21.905	Vocabulary for 3GPP Specifications						3.3.0	4.4.0	5.6.0	6.2.0
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	6.0.0
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						3.2.0	4.1.0	5.2.0	
22.041	Operator Determined Call Barring						3.3.1	4.1.0	5.0.0	
22.042	Network Identity and Time Zone (NITZ) service description; Stage 1						3.0.1	4.1.0	5.0.0	
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	5.0.0	6.0.0
22.067	enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 1						3.0.1	4.1.0	5.0.0	6.0.0
22.071	Location Services (LCS); Stage 1						3.4.0	4.4.1	5.1.1	6.3.0
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	5.10.0	6.1.0
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	
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						3.13.0	4.6.0	5.9.0	6.3.0
22.105	Services and service capabilities						3.10.0	4.3.0	5.2.0	6.1.0
22.115	Service Aspects Charging and billing						3.3.0	4.0.0	5.2.0	6.0.0
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	6.2.0
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	6.1.0
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	6.2.0
22.233	Transparent end-to-end packet-switched streaming service; Stage 1								5.0.0	6.2.0
22.242	Digital Rights Management (DRM); Stage 1									6.2.0
22.243	Speech recognition framework for automated voice services; Stage 1									6.2.0
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									1.0.0
22.934	Feasibility study on 3GPP system to Wireless Local Area Network (WLAN) interworking									6.1.0
22.940	IP Multimedia Subsystem (IMS) messaging; Stage 1									6.0.0
22.941	IP based multimedia framework; Stage 0								0.7.0	
22.944	Service requirements for UE functionality split								5.1.0	
22.950	Priority service feasibility study									6.2.0
22.951	Service aspects and requirements for network sharing									6.1.0
22.971	Automatic establishment of roaming relationships						3.1.1			
22.975	Advanced addressing						3.1.0			
22.976	Study on PS domain services and capabilities									2.0.0
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							4.0.0	5.0.0	

	1; Service description; Stage 1									
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	