Technical Specification Group Services and System Aspects
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Agenda Item: **7.1.1**

TSG SA1 STATUS REPORT

1 General Overview of Progress

The TSG_SA_WG1#18 Plenary Meeting was held in Busan, South Korea from the 11th to 15th November 2002. It was chaired by Mr Kevin Holley (mmO2) and the secretary was Mr Michael Clayton from the MCC. The host was Samsung Electronics.

2 External Liaisons

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

Document Number	Title	To	Copy	Sent
S1-022010	LS reply on Requirement for standardizing a Transcoding interface	T2, SA2	SerG	31/10/2002
S1-022123	Draft LS to OMA IMPS on Presence, IMS messaging and IMS group management	OMA Technical Plenary, OMA IMPS Working Group		12/11/2002
S1-022270	LS on Re: LS on Roaming Awareness Response to	T2	SA2, SA5, GSMA CPWP	12/11/2002
S1-022281	LS response to Questions from the European Numbering Forum	EU Numbering Forum, CN4		12/11/2002

3 Change Requests for Rel-4 or earlier

3.1 USAT requirements (22.038)

At its last meeting, SA1 identified a problem of consistency between the stage 1 and stage 3 of the SIM Toolkit specification 22.038. It would appear that some of the requirements from USAT stage 1 have not been implemented in stage 3 in releases 99 to rel-5.

Therefore, SA1 is presenting CRs to R99, Rel-4 and Rel-5 to correct the error for frozen releases, and a CR to Rel-6 to reintroduce the requirements.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020647	22.038	009		R99	F	USAT requirements R99	3.2.0	3.3.0	S1-022349
SP-18	SP-020647	22.038	010		Rel-4	A	USAT requirements Rel-4	4.1.0	4.2.0	S1-022350
SP-18	SP-020647	22.038	011		Rel-5	A	USAT requirements Rel-5	5.2.0	5.3.0	S1-022351
SP-18	SP-020647	22.038	012		Rel-6	B	USAT requirements Reintroduction of requirements	5.2.0	6.0.0	S1-022373

3.2 Corrections to terminology (22.135)

This CR was originally elaborated in response to the deletion of 04.08, when SA1 has undertook a clean-up of its specifications to correct the references to all TSs and normalised the terms used therein. However, on implementation, it was found the CR was not correct. Therefore, it is reproduced as revision 1 to take into account the changes in the TS since the CR was first produced.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020648	22.135	010	1	Rel-4	F	CR to 22.135 Corrections on terminology	4.1.0	4.2.0	S1-022201

3.3 Storage of configuration information on the (U)SIM (22.140)

At the last meeting, TSG-SA agreed that SA1 should provide CRs to include MMS configuration parameter storage on the (U)SIM. MMS is an application level service that will be deployed in both the GSM system and the third generation mobile systems. The ability to store MMS parameters on the (U)SIM will ensure service continuity as operators migrate their networks from 2G to 3G, and will help reduce operating costs and enhance subscriber experience.

It was agreed that Rel-4 MMS parameter capability is mandatory for the SIM and optional for the ME.

However, in doing this, SA1 identified that USIM and ME behaviour, with respect to MMS configuration parameter storage on the USIM needed to be clarified. Also, T2 and T3 have introduced the support for the MMS notifications and MMS user preferences on the (U)SIM and this needed to be reflected in the Stage 1 specification.

In conjunction with this, SA1 has send a liaison statement to SA in document SP-020644. This contains the agreed matrices of ME/SIM ME/USIM combinations for MMS service and Releases. The CRs below, co-inside with this and are presented for approval in document SP-020649.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020649	22.140	018		Rel-4	F	Storage of configuration information on the (U)SIM - for Rel 4	4.2.0	4.3.0	S1-022386
SP-18	SP-020649	22.140	019		Rel-5	A	Storage of configuration information on the (U)SIM - for Rel 5	5.3.0	5.4.0	S1-022387

4 Change Requests for Rel-5

The following CRs are for Release 5.

4.1 SIM access to IMS Rel-5/6 (21.101)

Requirements on access to the IMS services via existing R99/R4 USIMs were agreed by SA1 to enable a smoother customer transition towards new IM services. However it seems more and more realistic that at the launch of first IMS services, the amount of operator's 2G SIMs will not be neglectable as the migration towards new USIMs will not happen overnight.

Moreover, operators should be given flexibility in planning SIMs replacements and not be forced by incoming SIM-uncompatible new IM services. In addition, requiring support of GSM SIM for IMS doesn't pose any new functional requirement with respect to existing requirements.

On the security side, other methods based on GSM SIM algorithms (e.g. EAP SIM) could be applied to IMS authentication to enable access via legacy SIMs as well, although they don't guarentee mutual authentication like IMS AKA.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020650	22.101	110		Rel-5	F	SIM access to IMS Rel5	5.7.0	5.8.0	S1-022298
SP-18	SP-020650	22.101	111		Rel-6	A	SIM access to IMS Rel6	6.1.0	6.2.0	S1-022300

It should be noted that SA1 approved a liaison statement from its SWGs via email. This is presented in document SP-020639. However, work has moved on since the liaison statement and the above CRs should be considered as replacements for the liaison statement and the CRs therein.

4.2 Support of SIM and USIM in REL-5/6 (22.101)

SA1 has identified that the fact that SIM support is optional from REL-5 onwards is not completely reflected in the current version of 22.101. Therefore, SA1 is presenting CRs to Rel-5 and Rel-6 to correct this in document SP-020651.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020651	22.101	112		Rel-5	F	CR to 22.101 on Support of SIM and USIM in REL-5	5.7.0	5.8.0	S1-022339
SP-18	SP-020651	22.101	113		Rel-6	A	CR to 22.101 on Support of SIM and USIM in REL-6	6.1.0	6.2.0	S1-022340

4.3 Event notification mechanism to inform applications about new SCS (22.127)

SA1 has found a discrepancy that exists between the OSA stage 1 and stage 3 specifications in the sense that the Notification function is partly missing from the stage 1 (22.127).

Discussions have taken place on this subject in the CN5#20 and CN5#21meeting, where it was found that the existing Notification Function that does exist in the 22.127, is not completely aligned to the stage 3 specification (29.198-3). (See the stage 3 description of this feature: the sequences for the notification function can be found in 7.1.1 of the 29.198-3 v5.1.0 for instance. Interface definitions can be found in 7.3.1 and State Transition Diagrams in 7.4.4.) Therefore, SA1 is proposing a CR in document SP-020652 to aligne the two specifications.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020652	22.127	058		Rel-5	F	Event notification mechanism to inform applications about new SCS	5.4.0	5.5.0	S1-022250

4.4 CAMEL (22.078)

Once again, SA1 has processed a number of changes to CAMEL for Rel-5. The are as follows:

SA1 has received a liaison statement from CN2 regarding the change from "CAMEL-connected" to "CAMEL-PDP context active" state At CN2 #23 (April 2002, Helsinki), Tdoc N2-020419 was presented, a CR to 22.078 on Change "CAMEL-connected" to "CAMEL-PDP context active" state. CN2 endorsed the CRs to 22.078 and 29.002 and the CR to 23.078 was incorporated in the CAMEL Phase 4 draft of 23.078. The CR to 29.002 was approved at CN #26 and incorporated in the specification.

However, unfortunately the CR to 22.078 never got submitted to SA1. Therefore, it is was presented to SA1 which has forwarded it for approval by SA in document SP-020653.

The second CR relates to a change that was approved at the last SA, where SA1 proposed, and SA approved, a change to remove annex A. However, it was found that the stage 1 specification for CAMEL/IMS still references tables and subclauses from Annex A. Therefore, SA1 is presenting a CR in document SP-020653 to delete them.

The last CR relates to using a media type for a trigger. The stage 1 specification for CAMEL/IMS indicates the use of Media Type data as a trigger criterion as "for further study". Adding this as a trigger criterion indicates a change in the MAP ASN.1 definition for the CAMEL Subscription Information for IMS subscribers. Also, there is not enough service information to support the need to include the Media Type as a criterion for triggering based on the called identity during an IP Multimedia session setup. Therefore, the use of Media Type as a trigger criterion should not be required at this time for CAMEL subscribers in the IM CN.

All these CRs are presented in document SP-020653 for approval (there is currently no Rel-6 version).

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020653	22.078	150		Rel-5	F	LS on Disappearance of CN2 endorsed CAMEL4 22.078 CR	5.8.0	5.9.0	S1-022218
SP-18	SP-020653	22.078	151		Rel-5	F	CAMEL: Remove References to the old Annex A in 22.078	5.8.0	5.9.0	S1-022157
SP-18	SP-020653	22.078	152		Rel-5	F	CAMEL: Removal of media type as a trigger criterion for CAMEL/IMS	5.8.0	5.9.0	S1-022306

5 Change Requests for Rel-6

The following sections contain CRs to release 6.

5.1 Definitions and abbreviations for Rel-6 (21.905)

SA1 has receveived a single input, unusually from the T3 chairman. It would appear that the CR is to update vocabulary of 3G specificaitons document to cover recent versions of T3 documents.

It is presented in document SP-020654.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020654	21.905	043		Rel-6	D	Update to 3GPP TR 21.905, Vocabulary for 3GPP Specifications	6.0.0	6.1.0	S1-022223

5.2 IMS number portability (22.066)

In the SA1 SWG, a proposal was received to apply number portability to the IMS. After some discussion, the proposal was accepted and presented to SA1. The scope of the existing TS has been extended to include requirements for IMS number portability, with only minor changes to specification needed.

The result, accepted by SA1, is provided in document SP-020655.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.

SP-18	SP-020655	22.066	004		Rel-6	B	CR to 22.066 on IMS number portability	5.0.0	6.0.0	S1-021910

5.3 Changes for Priority Service (22.067)

Also during an SA1 SWG, a change to 22.067 was proposed to accommodate Priority Service. Some tuning of the wording was carried out in SA1 to bring the terminology in line with the existing text of 22.067 and to address the additional changes needed to describe the network internal and subscription use of priority level “B”. The result is provided in document SP-020656 for approval.

It was noted that a similar CR would be needed to TS 23.067 (eMLPP Stage 2), which should have been handled in CN4.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020656	22.067	004		Rel-6	C	CR to 22.067 for Priority Service	5.0.0	6.0.0	S1-022377

5.4 Rel-6 CRs for LCS (22.071)

SA1 has processed two CRs for LCS to 22.071. The first relates to the addition of consumer oriented categories and service types. New service types have been added to table 4.2: traffic and public transportation information, weather, gaming, find your friend, dating, chatting, route finding, asset and service finding, “where-am-I”.

The second relates to handling of privacy checks for Network Induced Location Requests. There are some instances when privacy checks are not deemed to be neccesary; i.e.

- lawful interception
- emergency calls
- anonymous tracking for statistical and O&M purposes
- home network as requested by the home network operator for its own internal purposes.

The two CRs are presented in document SP-020657 for approval.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020657	22.071	047		Rel-6	C	CR to LCS stage 1 'Service Type'	6.1.0	6.2.0	S1-022013
SP-18	SP-020657	22.071	048		Rel-6	C	Handling of privacy checks for Network Induced Location Requests	6.1.0	6.2.0	S1-022299

5.5 Rel-6 CRs for 22.101

A similar change to that for CR to 22.067 (section 5.2) a change is being proposed to 22.101 to support number portability for IMS. This is provided in CR 22.101-107.

Also, a requirement related to emergency calls was recently changed for release 5. The same change is also proposed for Rel 6 in that the serving network may download additional emergency numbers to the UE in order to ensure that local emergency numbers are known to the UE. These emergency numbers are only valid in that country (as identified by the MCC) and will be discarded when a new country is entered.

The two CRs are provided in document SP-020658 for approval.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020658	22.101	107		Rel-6	B	CR to 22.101 on IMS number portability rev of 1909	6.1.0	6.2.0	S1-022064
SP-18	SP-020658	22.101	108		Rel-6	B	CR to 22.101 Rel 6 on Emergency calls	6.1.0	6.2.0	S1-022119

5.6 Release 6 CRs on OSA (22.127)

SA1 is presenting a number of CRs to 22.127 on OSA.

CR 22.127-059 is proposing to enforce the alignment with Parlay, by introducing the possibility that the OSA-defined functions (both framework and non-framework ones) could be accessed through additional sets of interfaces at different levels of abstractions and with different programming formalisms.

CR 22.127-060 introduces the possibility to announce to interested applications that when a new SCS is registered to the Framework and to what extent the new SCS is backward compatible with an SCS the application is currently using. This allows applications to get informed automatically, for instance, about possibilities to migrate to a newer SCS. A special case occurs when there is an SCS available that immediately replaces an SCS the application is currently using as the latter needs to be taken “out of service”.

CR 22.127-061 provides detailed requirements as to the capabilities for an OSA application relating to IP Sessions. The subclause that describes the IP Session function is being changed to provide a clear indication of the meaning of an “IP Session”. This can be a flow OR a set of flows defined by a source and destination IP address/port and destination.

CR 22.127-062 contains a revision of the old version of the User Data Management text reintroduced in an earlier meeting for release 6 (previously deleted from release 5). Moreover it is a first small step in understanding the relation between OSA User Profile and the Generic User Profile.

CR 22.127-063 introduces an enhancement of the support that an OSA gateway can provide to interactions among applications and their users, by providing support for user-application authentication and privacy for users accessing applications

CR 22.127-064 introduces some flexibility to allow access to the SCF by applications in another administrative domain. For instance, an application in one network may be allowed to access the SCF in another network where the networks are owned by operators in the same group.

The CRs are provided in document SP-020659 for approval.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020659	22.127	059		Rel-6	B	CR to 22.127 on OSA interfaces at different levels of abstractions	6.1.0	6.2.0	S1-022249
SP-18	SP-020659	22.127	060		Rel-6	B	Introduction of migration support mechanism	6.1.0	6.2.0	S1-022251
SP-18	SP-020659	22.127	061		Rel-6	C	Enhancements to IP Session Function in OSA for the control and monitor of IP Flows (Follow up from S1-021927)	6.1.0	6.2.0	S1-022252
SP-18	SP-020659	22.127	062		Rel-6	B	CR to 22.127 on User Profile	6.1.0	6.2.0	S1-022258
SP-18	SP-020659	22.127	063		Rel-6	B	CR to 22.127 on Network functions for end-user/application interaction support	6.1.0	6.2.0	S1-022366

SP-18	SP-020659	22.127	064		Rel-6	B	CR to 22.127 on Framework Function for Federation	6.1.0	6.2.0	S1-022368

5.7 Release 6 CRs on Multimedia Messaging (22.140)

A number of changes are being proposed to the release 6 version of Multimedia Messaging in 22.140.

CR 22.140-020 is being presented to enhance the description of charging requirements for MMS.

CR 22.140-021 is also related to charging. This time, the change is to allow for a third party, who has a commercial agreement with the VASP (and possibly additional agreement with the operator and/or recipient), to be charged for the delivery of the message to the recipient.

CR 22.140-022 contains a requirement for preventing the loop of a MM.

CR 22.140-023 reflects the changes to the Release 6 WID. Features are introduced to support DRM, differentiated roaming behaviour, standardized user profiles, and support for a standardized interface to transfer CDRs.

The CRs are presented in document SP-020660 for approval.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020660	22.140	020		Rel-6	B	Requirements for the MMS charging models and charging mechanisms	5.3.0	6.0.0	S1-022312
SP-18	SP-020660	22.140	021		Rel-6	B	Additional feature for the MMS charging model	5.3.0	6.0.0	S1-022313
SP-18	SP-020660	22.140	022		Rel-6	B	Requirement for preventing the loop of MM	5.3.0	6.0.0	S1-022314
SP-18	SP-020660	22.140	023		Rel-6	B	[MMS] CR to 22.140 for Release 6	5.3.0	6.0.0	S1-022359

5.8 Release 6 CRs on PUSH (22.174)

Since the approval of 22.174 at SA #17, SA1 has done some fine tuning to it.

CR 22.174-001 removes a note indicating that value added services, which the push service as a service capability, may have additional charging requirements that are out of scope of this specification. It was understood that all 3GPP charging requirements must be reflected in the Stage 1.

CR 22.174-002 removes the requirement to have Media as an element in the CDR. This parameter is unecessary as there are already other parameters, such as message type, that will enable suitably flexible charging.

CR 22.174-003 removes an incorrect reference in the specification.

CR 22.174-004 seeks to remove the attribute for “Delivery Class” since it is superfluous as attributes for delivery time, and priority already exist.

CR 22.174-005 contains a change to the charging for PUSH. It was thought that charging for cancellation of a service is unnecessary.

The CRs are presented in document SP-02661 for approval.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020661	22.174	001		Rel-6	F	Removal of Note	6.0.0	6.1.0	S1-021947
SP-18	SP-020661	22.174	002		Rel-6	C	Removal of Media from Charging Parameters	6.0.0	6.1.0	S1-021949
SP-18	SP-020661	22.174	003		Rel-6	D	Removal of void reference	6.0.0	6.1.0	S1-021950
SP-18	SP-020661	22.174	004		Rel-6	C	Push Delivery Class	6.0.0	6.1.0	S1-022188
SP-18	SP-020661	22.174	005		Rel-6	D	Revision of Requirments for One-Off Charging	6.0.0	6.1.0	S1-022334

5.9 Release 6 CRs on Streaming (22.233)

The work on Streaming for release 6 has continued with a vengence in SA1. Seven CRs are presented for approval to 22.233. These are:

CR 22.233-003 adds a stage 1 requirement to provide for the capability for Real Time monitoring of application level feedback therefore allowing the operator to determine the quality of streaming provided to the end user.

CR 22.233-004 adds requriement for support of Digital Rights Management. This is particularly important for streaming.

CR 22.233-005 adds the provision for a standard communication protocol between PSS and MMS.

CR 22.233-006 adds the requirement for the asset information capability to be included to improve the end user experience and functionality. Without this, it will not be possible to present asset information such as copyright, title, caption (description), artist (performer) and author in a consistent manner.

CR 22.233-007 clarifies the text on transport of streaming media, avoiding degredation and handling of errors.

CR 22.233-008 adds a parameter to measure the quality of a link in terms of packet loss ratio, as taken from the “fraction lost” field of RTCP. The quality of service might vary during a streaming session. Therefore it can be useful for the operator to have an accurate idea of what the QoS was during a streaming session. This could allow the operator to possibly charge the session depending on the quality. For instance, under a certain threshold, the session would not be billed.

CR 22.233-009 adds the requirement for Content Cache and its function in Streaming service. Content Cache is included in the figure of Network elements involved in a 3G packet switched streaming service, but there is no correlative declaration.

The CRs are provided in document SP-020662 for approval.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020662	22.233	003		Rel-6	B	CR on streaming metrics	6.0.0	6.1.0	S1-022037
SP-18	SP-020662	22.233	004		Rel-6	B	DRM requirement for streaming	6.0.0	6.1.0	S1-022335
SP-18	SP-020662	22.233	005		Rel-6	B	Interaction MSS/PSS	6.0.0	6.1.0	S1-022337
SP-18	SP-020662	22.233	006		Rel-6	B	Asset Information in File Format	6.0.0	6.1.0	S1-022353
SP-18	SP-020662	22.233	007		Rel-6	B	Clarification of Transport Requirements	6.0.0	6.1.0	S1-022354
SP-18	SP-020662	22.233	008		Rel-6	B	CR on 22.233 'PSS Charging'	6.0.0	6.1.0	S1-022355

SP-18	SP-020662	22.233	009		Rel-6	B	CR FOR R6 22.233 on Declaration of Content Cache	6.0.0	6.1.0	S1-022327

5.10 Codecs used for speech recognition framework (22.243)

The TS 22.243 contains in a couple of places discussion about enabling use of codecs for speech recognition framework. It is not clear from the TS if a default codec for this purpose should be considered. Since conventional codecs are already included in the standard it has been suggest that for Rel-6 the conventional codecs are considered as default and the DSR codecs as optional.

This CR has caused some controversy. It was agreed in SA1, but with an objection from Orange and Motorola.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020663	22.243	002		Rel-6	F	CR on TS 22.243, Codecs used for speech recognition framework	6.0.0	6.1.0	S1-022162

5.11 Removal of references (22.243)

Somewhat less controversial the TS 22.243 contains two informative references which are company input documents / contributions to ETSI Aurora. These are not ETSI published specifications, but simply input documents from individual companies.

Therefore, they are being removed from 22.243.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020664	22.243	001		Rel-6	F	CR to TS 22.243 Removal of references	6.0.0	6.1.0	S1-021928

5.12 Release 6 CRs on Wireless LAN (22.934)

Since the approval of 22.934 on Wireless LAN at SA #17, SA1 has to minor changes.

The first is to provide clarification of support of APNs for Scenario 3, 4 and 5. Discussions in SA1 have shown that it is unclear as to the distinction between scenario 2 and scenario 3 and that there are different interpretations of these scenarios. The PS domain provides the capability to define access points identified by APNs to which the users subscribe. This is clearly a service provided by the PS domain and hence is under scenario 3. Scenario 2 covers the ability to use 3GPP access control and charging, but is limited to providing the set of services “inherently offered by being addressable in an IP network”. The use of APNs is not inherently offered in an IP network. The distinction between the service requirements for scenario 2 and 3 is clarified in CR 22.934-001.

The second relates to WLAN-LCS interworking requirement. Service capability interworking is mututal interworking between 3GPP user and WLAN user. When a user contracts with operator, the service provided to user is independent of the specific access network constructed by operator. So location sevice should be introduced to WLAN access network.

The CRs are provided in document SP-020665.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020665	22.934	001		Rel-6	F	WLAN: Clarification of support of APNs for Scenario 3, 4 and 5	6.0.0	6.0.0	S1-022261
SP-18	SP-020665	22.934	002		Rel-6	B	WLAN-LCS interworking requirement	6.0.0	6.1.0	S1-022328

5.13 CRs to 21.905 and 22.101 to introduce WLAN requirements

In conjunction with the TR on WLAN, SA1 has produced the first two changes to implement the requirements into the specification set. The first is a simple change to include the definitions and abbreviations into 21.905 (CR 044).

The second is to TS 22.101 where a new section 4.8 has been added to give the high level requirements. Changes have been made to the sections covering Emergency Call, Numbering, USIM, Roaming, charging and Subscription.

The CRs are provided in document SP-020666 for approval.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020666	21.905	044		Rel-6	B	Cr to 21.905 to introduce WLAN terminology	6.0.0	6.1.0	S1-022264
SP-18	SP-020666	22.101	109		Rel-6	B	CR to 22.101 on WLAN interworking	6.1.0	6.2.0	S1-022263

5.14 Release 6 CRs on Priority service feasibility study (22.950)

As is the case with any newly approved TR, some fine tuning has occurred to 22.950, the Priority service feasibility study.

CR 22.950-001 accommodates comments received from RAN WG2 and T WG3. This is in the form of an addition of references to SIM Application Toolkit and Access Service Classes (ASC) to support Priority Service.

CR 22.950-002 provides for the inclusion of an additional capability for Priority Trunk Queuing to increase the probability of call completion for Priority Service calls.

CR 22.950-003 clarifies the requirement related to priority service and emergency calls interactions.

CR 22.950-004 includes a high level requirement for the coexistence of Priority Service and eMLPP in the same network.

CR 22.950-005 clarifies the high level requirement given in priority call origination and termination sections.

The CRs are provided in document SP-020667 for approval.

SA	Doc. No.	Spec	CR	Rev	Phase	Cat	Subject	Vers	New Vers	SA1 Doc.No.
SP-18	SP-020667	22.950	001		Rel-6	D	CR to 22.950 on RAN-T changes	6.0.0	6.1.0	S1-022099
SP-18	SP-020667	22.950	002		Rel-6	B	CR to 22.950 on Priority Trunk Queuing High Level Requirement	6.0.0	6.1.0	S1-022282
SP-18	SP-020667	22.950	003		Rel-6	F	Changes to Emergency Calls Interactions	6.0.0	6.1.0	S1-022283
SP-18	SP-020667	22.950	004		Rel-6	B	Coexistence of Priority Service and eMLPP in the same network	6.0.0	6.1.0	S1-022284

SP-18	SP-020667	22.950	005		Rel-6	D	Priority Call Origination and Termination High Level Requirements Clarification	6.0.0	6.1.0	S1-022285

6 New TSs/TRs

SA1 has a number of TSs and TR to present for information and approval.

6.1 TR 22.951 version 2.0.0 on Network Sharing

Document SP-020668 contains version 2.0.0 of TR 22.951 on Network Sharing for approval. This has been seen as Version 1.0.0 for information in SA #17.

In the current dynamic market place, as a result of partnerships, acquisitions, creative agreements among operators and so on, the need for tools that enable various degrees of network sharing is becoming more and more important. When GSM and then UMTS were specified, the possibility of sharing part or all of the network by two or more separated commercial entities was not considered and as a result the standards lack some functionalities that enable the realisation of such commercial agreements.

GSM was designed under the principle "one operator, one radio access network". The GSM network has some possibilities of infrastructure sharing, but it does not support true radio access network sharing. The initial design of 3GPP system has followed the same principle.

This technical report is aimed to capture the service and user requirements that must be fulfilled by the 3GPP system in order to enable network sharing. Network sharing includes various scenarios e.g. common radio access network connected to multiple core networks or multiple radio access networks sharing one core network.

Changes since last presentation to TSG-SA meeting #17:

- Clarifications and modifications to scenario 1-5
- Additional requirements to chapter 7.2-7.3
- Conclusions and introduction chapters included
- A scenario description to annex A added
- General editorial improvements

Outstanding issues:
- Security Requirements
- Limitations for Scenario1: Multiple core networks sharing common radio access network in R99

6.2 TS 22.250 version 2.0.0 on IMS group management capability

Work has progressed on IMS group management capability in TS 22.250 and it is now at Version 2.0.0. The TS was seen at SA #17 for information.

The Technical Specification defines the requirements for the support of IMS group management capability. IMS group management capability provides a possibility to manage network based groups. IMS group management allows defining different roles and rights to the members of a group, defining group level information and properties, etc. The IMS group management is a generic capability that can be utilised together with several different services.

The present document covers number of requirements that are essential for group management. Out of those requirements search functionality requires clarification: what is the scope of the search, who can perform it, etc. Another open items are: applying default rights for the new members of the group, possibility to hand over administrator rights and clarification of the "authorised users and applications".

Changes since last presentation to TSG-SA meeting #17:

- Refinement of administrator and member roles, and of the information elements maintained for groups and group members.
- There have been no substantive changes. The document maturity has increased; there is no disagreement over the basic goals and application of the IMS Group Management service.

There are no outstanding or contentious issues.

It is presented for approval in document SP-020669

6.3 TR 22.940 version 2.0.0 on IMS Messaging

The Technical Report 22.940 identifies the issues and needs surrounding messaging solutions related to the 3GPP IP Multimedia Subsystem (IMS). The report identifies essential messaging requirements, taking into consideration use cases that illustrate the needs of both service providers and users. The report also highlights and contrasts the messaging capabilities of the 3GPP Multimedia Messaging Service and how these messaging capabilities might relate to or interact with the messaging services running in IMS.

There has been no change since the last meeting and there are no outstanding or contentious issues.

It is presented for approval in document SP-020670.

6.4 TS 22.340, Version 2.0.0 on IMS Messaging; Stage 1

At the last meeting of SA, TR 22.940 was presented for information. At that time, SA requested that part of the report be turned into a specification. In line with this, SA1 has produced TS 22.340 which is fully derived from the TR 22.940 presented for information at SA#17. In order to progress the work in the other TSGs in a timely manner, and due to the nature of the document which baseline is a document already presented for information at SA, it is kindly requested to approve this document.

There have been no changes since the last meeting of SA, and there are no contentious issues. The only outstanding issue is that SA1 is still evaluating the possibility of changing the term “session based messaging”. However, a suitable alternative has not yet been found.

It is presented for approval (and vicariously for information) in document SP-020671.

7 WIs from SA1

There are a number of WIDs being put forward by SA1 for approval; some are updates and the others are new.

7.1 Updated WIs from SA1

7.1.1 Updated GUP Work Item Description

The work in SA1 on GUP is still ongoing and it has been slightly extended. The GUP work needs to be carefully co-ordinated with ongoing work in OMA and other bodies such as Liberty Alliance. SA1, therefore, is proposing to update the GUP WID to reflect these challenges.

Also, SA1 needs to examine the new versions of S1 specifications impacted by the GUP work item and this has been reflected as well.

The updated WI is presented in document SP-020672 for approval.

7.2 New WIs from SA1

7.2.1 Proposed WID on Study of subscriber and operators relationship in IMS and related ISIM requirements for Rel 6"

For Rel 5 3GPP has developed and standardized the IMS as a means to provide IP based multimedia services. Part of the IMS related development includes a smart card application to be used for access to IMS, i.e. the ISIM application. In Rel –5 the ISIM is required to be co-located with a USIM on a UICC, for architectural reasons (Go interface).

For releases beyond Rel–5 it could be envisaged to have ISIMs on a UICC without requirements for USIMs on the very same UICC, as well to require new technical solution to put in relationships between thus realised multiple subscriptions.

A technical study is needed to assess the different technical requirements that the relation among subscriptions to different domain as well the relation among the operators of the different domains could generate. This is a pre-condition for the evaluation of the implications at system level as well as requirements and technical feasibility of the separation of USIMs and ISIMs, on separate independent UICC.

Therefore, SA1 is proposing a new WI to cover this work which is presented in document SP-020673 for approval.

It should be noted that a primary draft of a TR, which is expected to be the output from this work, has been elaborated. It is presented in a liaison statement to SA in document SP-020676. The document is presently sent as informal information on the work progress (no specific action is required on the TR).

8 Open Issues

SA1 has one issue that has not resulted in a CR, but which has been discussed and requires resolution; support of SMS over GPRS.

From a specification point of view the support of SMS is mandatory in both the MSC and the SGSN, so the MS or UE can decide whether to send mobile originated short messages via the MSC or SGSN depending on the registration status of the MS or UE.

However, there are networks where some SGSNs do not currently support SMS, (or perhaps these SMS capabilities are disabled). This leads to problems for the MS / UE as the specifications do not provide any indication to the MS for the case where an SGSN does not support SMS.

This issue was raised at the CN#17 plenary meeting and also SA#17 plenary meetings, leading to a long debate as to whether or not the support of SMS should or should not be mandatory in the SGSN.

After discussion in SA1, a proposal for an "implementation guide" to advise ME manufacturers of the suggested behaviour of a mobile attempting to send SMS over GPRS:

> If the UE preferred method, at power up, is sending SMS over GPRS, and this fails, either due to a direct failure indication or rejection, or due to the complete lack of a response, then the UE switches to sending subsequent SMS's by CS, but should revert to trying to send SMS's over GPRS as soon as possible. If "network congestion" is given as the failure cause over GPRS, automatic change to CS should not be made.
>
> If the SMS attempt fails on both GPRS and CS, then the user/toolkit is informed.
>
> The above mechanism applies to class A and B GPRS mobiles.

SA is being asked if this is acceptable and, if so, how such an implementation guide should be incorporated in the specification(s), if at all.

9 Other Issues

The time has come for the election of a chairman for SA1. The current chairman Kevin Holley (mmO2) has indicated his intention not to stand for re-election and so SA1 is searching for nominations for the position. For up-to-date information on the process, information can be found at:

http://www.3gpp.org/TB/SA/SA1/Election/election.htm

Kevin will be sorely missed, but SA1 wishes him all the best in his new role as chairman of the OMA requirements group.

10 Meetings of SA1

10.1 Meetings since last SA

The following meetings have been held since SA #15.

Meeting	Date	Place	Host
GUP	14-15 October 2002	Beijing, China	Huawei Technologies
IMS	14-15 October 2002	Beijing, China	Huawei Technologies
LCS	14-15 October 2002	Beijing, China	Huawei Technologies
Messaging	14-15 October 2002	Beijing, China	Huawei Technologies
Netshare	14-15 October 2002	Beijing, China	Huawei Technologies
OSA	14-15 October 2002	Beijing, China	Huawei Technologies
PUSH	14-15 October 2002	Beijing, China	Huawei Technologies
SES	14-15 October 2002	Beijing, China	Huawei Technologies
Streaming	14-15 October 2002	Beijing, China	Huawei Technologies
QoS	14-15 October 2002	Beijing, China	Huawei Technologies
S1#18	11-15 November 2002,	Busan, North Korea	Samsung Electronics

10.2 Planned meetings

SA1 has reviewed the work status in the group and has decided to cut down the number of SWG meetings. Therefore, some changes were made to the meetin schedule for next year. The schedule, so far, is as follows.

SA1 Plenary

SA1#19	20 -24 January 2003,	San Francisco, USA, hosted by AWS with SA2/T2
SA1#20	07 - 11 April 2003,	No host
SA1#21	07 - 11 July 2003,	Sophia Antipolis, hosted by ETSI
SA1#22	13 - 17 October 2003,	Offer from North American Friends

SA1 SWGs

SA1 SWGs #21	12 - 16 May 2003,	SanDiego,USA, North American Friends
SA1 SWGs #22	25 - 29 August 2003,	Sweden, hosted by Telia

Annex 1: Documents provided to this Plenary

Tdoc	Title	Agenda
SP-020645	**Presentation of SA1 to SA #18**	7.1.1
SP-020646	**Status report of SA1 to SA #18**	7.1.1
SP-020647	**Release 99/4/5/6 CRs to 22.038 on USAT requirements (deletion and re-introduction)**	7.1.3
SP-020648	**Release 4 CR to 22.135 on Corrections to terminology**	7.1.3
SP-020649	**Release 4/5 CRs to 21.140 on Storage of configuration information on the (U)SIM**	7.1.3
SP-020650	**Release 5/6 CRs to 22.101 on SIM access to IMS Rel-5/6**	7.1.3
SP-020651	**Release 5/6 CRs to 22.101 on Support of SIM and USIM in REL-5/6**	7.1.3
SP-020652	**Release 5 CR to 22.127 on Event notification mechanism to inform applications about new SCS**	7.1.3
SP-020653	**Release 5 CRs to 22.078 on various subjects**	7.1.3
SP-020654	**Release 6 CRs to 21.905 on definitions and abbreviations**	7.1.3
SP-020655	**Release 6 CR to 22.066 on IMS number portability**	7.1.3
SP-020656	**Release 6 CR to 22.067 for Priority Service**	7.1.3
SP-020657	**Release 6 CRs to 22.071 on LCS**	7.1.3
SP-020658	**Release 6 CRs to 22.101 on Number portability and emergency calls**	7.1.3
SP-020659	**Release 6 CRs to 22.127 on OSA (Various subjects)**	7.1.3
SP-020660	**Release 6 CRs to 22.140 on Multimedia Messaging (Various subjects)**	7.1.3
SP-020661	**Release 6 CRs to 22.174 on PUSH (Various subjects)**	7.1.3
SP-020662	**Release 6 CRs to 22.233 on Streaming (Various subjects)**	7.1.3
SP-020663	**Release 6 CR on TS 22.243 on Codecs used for speech recognition framework**	7.1.3
SP-020664	**Release 6 CR to TS 22.243 on Removal of references**	7.1.3
SP-020665	**Release 6 CRs to 22.934 on Wireless LAN (Various subjects)**	7.1.3

SP-020666	**Release 6 CRs to 21.905 and 22.101 to introduce WLAN requirements**	7.1.3
SP-020667	**Release 6 CRs to 22.950 on Priority service feasibility study (Various subjects)**	7.1.3
SP-020668	**TR 22.951 version 2.0.0 on Network Sharing for Approval**	7.1.3
SP-020669	**TS 22.250, Version 2.0.0 on IMS group management capability for Approval**	7.1.3
SP-020670	**TR 22.940, Version 2.0.0 on IMS Messaging for Approval**	7.1.3
SP-020671	**TS 22.340, Version 2.0.0 on IMS Messaging; Stage 1 for Information and Approval**	7.1.3
SP-020672	**Updated GUP Work Item Description**	7.1.3
SP-020673	**New WID description for "Study of subscriber and operators relationship in IMS and related ISIM requirements for 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-18	SP-020654	21.905	043		Rel-6	D	Update to 3GPP TR 21.905, Vocabulary for 3GPP Specifications	6.0.0	6.1.0	S1-022223
SP-18	SP-020666	21.905	044		Rel-6	B	Cr to 21.905 to introduce WLAN terminology	6.0.0	6.1.0	S1-022264
SP-18	SP-020647	22.038	009		R99	F	USAT requirements R99	3.2.0	3.3.0	S1-022349
SP-18	SP-020647	22.038	010		Rel-4	A	USAT requirements Rel-4	4.1.0	4.2.0	S1-022350
SP-18	SP-020647	22.038	011		Rel-5	A	USAT requirements Rel-5	5.2.0	5.3.0	S1-022351
SP-18	SP-020647	22.038	012		Rel-6	B	USAT requirements Reintroduction of requirements	5.2.0	6.0.0	S1-022373
SP-18	SP-020655	22.066	004		Rel-6	B	CR to 22.066 on IMS number portability	5.0.0	6.0.0	S1-021910
SP-18	SP-020656	22.067	004		Rel-6	C	CR to 22.067 for Priority Service	5.0.0	6.0.0	S1-022377
SP-18	SP-020657	22.071	047		Rel-6	C	CR to LCS stage 1 'Service Type'	6.1.0	6.2.0	S1-022013
SP-18	SP-020657	22.071	048		Rel-6	C	Handling of privacy checks for Network Induced Location Requests	6.1.0	6.2.0	S1-022299
SP-18	SP-020653	22.078	150		Rel-5	F	LS on Disappearance of CN2 endorsed CAMEL4 22.078 CR	5.8.0	5.9.0	S1-022218
SP-18	SP-020653	22.078	151		Rel-5	F	CAMEL: Remove References to the old Annex A in 22.078	5.8.0	5.9.0	S1-022157
SP-18	SP-020653	22.078	152		Rel-5	F	CAMEL: Removal of media type as a trigger criterion for CAMEL/IMS	5.8.0	5.9.0	S1-022306
SP-18	SP-020658	22.101	107		Rel-6	B	CR to 22.101 on IMS number portability rev of 1909	6.1.0	6.2.0	S1-022064
SP-18	SP-020658	22.101	108		Rel-6	B	CR to 22.101 Rel 6 on Emergency calls	6.1.0	6.2.0	S1-022119
SP-18	SP-020666	22.101	109		Rel-6	B	CR to 22.101 on WLAN interworking	6.1.0	6.2.0	S1-022263
SP-18	SP-020650	22.101	110		Rel-5	F	SIM access to IMS Rel5	5.7.0	5.8.0	S1-022298
SP-18	SP-020650	22.101	111		Rel-6	A	SIM access to IMS Rel6	6.1.0	6.2.0	S1-022300
SP-18	SP-020651	22.101	112		Rel-5	F	CR to 22.101 on Support of SIM and USIM in REL-5	5.7.0	5.8.0	S1-022339
SP-18	SP-020651	22.101	113		Rel-6	A	CR to 22.101 on Support of SIM and USIM in REL-6	6.1.0	6.2.0	S1-022340
SP-18	SP-020652	22.127	058		Rel-5	F	Event notification mechanism to inform applications about new SCS	5.4.0	5.5.0	S1-022250
SP-18	SP-020659	22.127	059		Rel-6	B	CR to 22.127 on OSA interfaces at different levels of abstractions	6.1.0	6.2.0	S1-022249
SP-18	SP-020659	22.127	060		Rel-6	B	Introduction of migration support mechanism	6.1.0	6.2.0	S1-022251
SP-18	SP-020659	22.127	061		Rel-6	C	Enhancements to IP Session Function in OSA for the control and monitor of IP Flows (Follow up from S1-021927)	6.1.0	6.2.0	S1-022252
SP-18	SP-020659	22.127	062		Rel-6	B	CR to 22.127 on User Profile	6.1.0	6.2.0	S1-022258
SP-18	SP-020659	22.127	063		Rel-6	B	CR to 22.127 on Network functions for	6.1.0	6.2.0	S1-022366

							end-user/application interaction support			
SP-18	SP-020659	22.127	064		Rel-6	B	CR to 22.127 on Framework Function for Federation	6.1.0	6.2.0	S1-022368
SP-18	SP-020648	22.135	010	1	Rel-4	F	CR to 22.135 Corrections on terminology	4.1.0	4.2.0	S1-022201
SP-18	SP-020649	22.140	018		Rel-4	F	Storage of configuration information on the (U)SIM - for Rel 4	4.2.0	4.3.0	S1-022386
SP-18	SP-020649	22.140	019		Rel-5	A	Storage of configuration information on the (U)SIM - for Rel 5	5.3.0	5.4.0	S1-022387
SP-18	SP-020660	22.140	020		Rel-6	B	Requirements for the MMS charging models and charging mechanisms	5.3.0	6.0.0	S1-022312
SP-18	SP-020660	22.140	021		Rel-6	B	Additional feature for the MMS charging model	5.3.0	6.0.0	S1-022313
SP-18	SP-020660	22.140	022		Rel-6	B	Requirement for preventing the loop of MM	5.3.0	6.0.0	S1-022314
SP-18	SP-020660	22.140	023		Rel-6	B	[MMS] CR to 22.140 for Release 6	5.3.0	6.0.0	S1-022359
SP-18	SP-020661	22.174	001		Rel-6	F	Removal of Note	6.0.0	6.1.0	S1-021947
SP-18	SP-020661	22.174	002		Rel-6	C	Removal of Media from Charging Parameters	6.0.0	6.1.0	S1-021949
SP-18	SP-020661	22.174	003		Rel-6	D	Removal of void reference	6.0.0	6.1.0	S1-021950
SP-18	SP-020661	22.174	004		Rel-6	C	Push Delivery Class	6.0.0	6.1.0	S1-022188
SP-18	SP-020661	22.174	005		Rel-6	D	Revision of Requirments for One-Off Charging	6.0.0	6.1.0	S1-022334
SP-18	SP-020662	22.233	003		Rel-6	B	CR on streaming metrics	6.0.0	6.1.0	S1-022037
SP-18	SP-020662	22.233	004		Rel-6	B	DRM requirement for streaming	6.0.0	6.1.0	S1-022335
SP-18	SP-020662	22.233	005		Rel-6	B	Interaction MSS/PSS	6.0.0	6.1.0	S1-022337
SP-18	SP-020662	22.233	006		Rel-6	B	Asset Information in File Format	6.0.0	6.1.0	S1-022353
SP-18	SP-020662	22.233	007		Rel-6	B	Clarification of Transport Requirements	6.0.0	6.1.0	S1-022354
SP-18	SP-020662	22.233	008		Rel-6	B	CR on 22.233 'PSS Charging'	6.0.0	6.1.0	S1-022355
SP-18	SP-020662	22.233	009		Rel-6	B	CR FOR R6 22.233 on Declaration of Content Cache	6.0.0	6.1.0	S1-022327
SP-18	SP-020664	22.243	001		Rel-6	F	CR to TS 22.243 Removal of references	6.0.0	6.1.0	S1-021928
SP-18	SP-020663	22.243	002		Rel-6	F	CR on TS 22.243, Codecs used for speech recognition framework	6.0.0	6.1.0	S1-022162
SP-18	SP-020665	22.934	001		Rel-6	F	WLAN: Clarification of support of APNs for Scenario 3, 4 and 5	6.0.0	6.0.0	S1-022261
SP-18	SP-020665	22.934	002		Rel-6	B	WLAN-LCS interworking requirement	6.0.0	6.1.0	S1-022328
SP-18	SP-020667	22.950	001		Rel-6	D	CR to 22.950 on RAN-T changes	6.0.0	6.1.0	S1-022099
SP-18	SP-020667	22.950	002		Rel-6	B	CR to 22.950 on Priority Trunk Queuing High Level Requirement	6.0.0	6.1.0	S1-022282
SP-18	SP-020667	22.950	003		Rel-6	F	Changes to Emergency Calls Interactions	6.0.0	6.1.0	S1-022283
SP-18	SP-020667	22.950	004		Rel-6	B	Coexistence of Priority Service and eMLPP in the same network	6.0.0	6.1.0	S1-022284
SP-18	SP-020667	22.950	005		Rel-6	D	Priority Call Origination and Termination High Level Requirements	6.0.0	6.1.0	S1-022285

							Clarification			

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 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				
02.94	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	5.5.0	6.0.0
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	
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	5.2.0	
22.066	Support of Mobile Number Portability (MNP); Stage 1						3.2.0	4.0.0	5.0.0	
22.067	enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 1						3.0.1	4.1.0	5.0.0	
22.071	Location Services (LCS); Stage 1						3.4.0	4.4.1	5.1.1	6.1.0
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	5.8.0	
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	5.7.0	6.1.0
22.105	Services and service capabilities						3.10.0	4.3.0	5.2.0	6.0.0
22.115	Service Aspects Charging and billing						3.3.0	4.0.0	5.2.0	
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	5.4.0	6.1.0
22.129	Handover requirements between UTRAN and GERAN or other radio systems						3.6.0	4.4.0	5.2.0	
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	4.2.0	5.3.0	
22.141	Presence service; Stage 1									6.1.0
22.146	Multimedia Broadcast/Multicast Service (MBMS); Stage 1									6.1.0
22.174	Push service; Stage 1									6.0.0
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	6.1.0
22.233	Transparent end-to-end packet-switched streamng service; Stage 1								5.0.0	6.0.0
22.242	Digital Rights Management (DRM); Stage 1									6.1.0
22.243	Speech recognition framework for automated voice services; Stage 1									6.0.0
22.250	IP Multimedia Subsystem (IMS) Group Management; Stage 1									1.0.0
22.800	IP Multimedia Subsystem (IMS) subscription and access scenarios									0.0.5
22.934	Feasibility study on 3GPP system to Wireles Local Area Network (WLAN) interworking									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									6.0.0
22.951	Service aspects and requirements for network sharing									1.0.0
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 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	