TSGS#21(03)0453

Source: **Chairman, Secretary SA1**

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

Document for: **Information and Decision**

Agenda Item: **7.1.1**

TSG SA1 STATUS REPORT

1 General Overview of Progress

The TSG_SA_WG1#20 Plenary Meeting was held in Sophia Antipolis, France from the 7th–11th June 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
S1-030636	LS to OMA on MMS	Email, OMA REQ, SA		23/07/2003
S1-030832	Reply to LS from T1P1 on Emergency Services Routing Based on Interim Position	T1P1, TSG SA2, TSG CN4		16/07/2003
S1-030949	LS on Delivery Reports	T2, GSMA SERG		23/07/2003
S1-030966	Reply LS on 'Request for Information Regarding WLAN Interworking Impacts to UICC applications'	SA3, T3	SA2, EP SCP	16/07/2003
S1-030967	Re: LS on SMS/MMS Interworking from WLANs	T2, SA2, CN1, OMA MAG Push	CN4, OMA MAG, OMA MAG MMSG	16/07/2003
S1-030969	Aspects on Priority Service and eMLPP in public networks	GSMA SerG, EMTEL		04/08/2003
S1-030978	LS on Frames WI Description	SCP-WG3	T3	16/07/2003
S1-030979	Response LS on video telephony	GSMA SerG	SA5, CN4	16/07/2003

3 Change Requests for Rel-4 or earlier

3.1 Modification of emergency number identification rules (22.101)

In R99 the logic of SIM/USIM emergency numbers was changed from having only additional numbers on the list to having a complete list of emergency numbers. This complete list overrides emergency numbers stored in the ME. There is however a problem in implementing these requirements since the ME is not able to deteremine the release of the SIM/USIM and thereby whether the intention of the operator was to include complete list of emergency numbers or only a list of additional emergency numbers.

A (R99 or later) ME may thus treat a (pre-R99) SIM as if it would contain a complete list of emergency numbers although it contains only some additional emergency numbers. In this case, the ME may set up a normal call instead of an emergency call when some common emergency numbers are dialled. In many cases the network is able to route the call anyway to the emergency centre (but may be unable to provide location information, that could be required by the regulator). It is also possible that the network does not identify the dialled number as an emergency number (that might be used e.g. as a regular service number in the country where the user is roaming).

The proposed solution is to not consider the SIM/USIM emergency number list as "complete list of emergency numbers" but to allow also 112 and 911 to be interpreted as emergency numbers in R99. Because of legacy terminals on the field, also the old interpretation ("complete list of emergency numbers") is allowed.

The CRs to R99, Rel-4, Rel-5 and Rel-6 to implement this change are provided in document SP-030492 for approval. These documents were agreed in SA1 by email approval.

3.1 Correction of requirements on the identity format of LCS clients (22.071)

Currently, 22.071 requires that LCS clients are identified by a E.164 number or by an Access Point Name (APN). However, identification by APN, which was introduced in Rel-4, has never been implemented. This causes misalignment between stages 1 and 2, which the CRs correct.

The CRs to Rel-4, Rel-5 and Rel-6 are provided in document SP-030455 for approval.

4 Change Requests for Rel-5

The following CRs are for Release 5.

4.1 Correction of the Definition of CDR (21.905)

SA1 has received a liaison statement from SA5 regarding the Definition of CDR. It would appear that the correct definition is currently Call Detail Record (CDR) and it should be Charging Data Record (CDR); it is correct in 21.905 in the abbreviation clause. By making this change to the Rel-5 and Rel-6 TRs, the definition is aligned with 32.200 and with the Abbreviation clause.

The CRs to Rel-5 and Rel-6 are provided in SP-030456.

4.2 Clarification on USIM-based access to IMS (22.101)

The final Rel-5 change relates to 22.101 and a Clarification on USIM-based access to IMS. Currently, access to the IMS services is possible using 3GPP release 99 and release 4 UICCs, but there is no text indicating what should occur if there is no ISIM present on the UICC. Also, text is added to indicate that if an ISIM is present on the UICC it shall be used to access the IMS.

The CRs to Rel-5 and Rel-6 are provided in document SP-030457.

4.3 Alignment of stage 1 with stage 2 & stage 3 (22.078)

SA1 has spent some time reviewing the Rel-5 stage 1 for CAMEL and has discovered a number of errors in TS 22.078. Most error corrections are alignment of the stage 1 with the stage 2 (TS 23.078) and stage 3 (TS 29.078).

The corrections are provided in document SP-030458 for approval.

5 Change Requests for Rel-6

The following sections contain CRs to release 6.

5.1 Location Services (22.071)

Three changes are presented to 22.071 regarding Location Services for Rel-6.

Clarification of Mobile Originating Location
It has been identified that the definition of “Autonomous Self Location” is ambiguous. The first sentence implies that no interaction with a network may be necessary i.e. fully autonomous, to obtain a location estimate, whilst the following sentence states that a single interaction is necessary. It is assumed that the fully autonomous case is outside the scope of 3GPP e.g. non-assisted GPS, as no interaction with the network is required within the LCS architecture, and therefore this conflicting sentence needed to be deleted.

A requirement of authentication to the Target UE user
According the current specification, a Target UE user can initiate an operation to modify his LCS subscriber information, or can query/cancel the ongoing LCS requests at any time. However, there is no corresponding mechanism to check the validity of the Target UE user and so, in this case, the user LCS data and the LCS requests are not safe.

Introduction of LCS QoS Classes
Currently any location estimate that does not satisfy the QoS requested in an original location request is discarded. It is assumed by SA1 is that in some cases a location is better than having no location estimate at all even if it does not satisfy the QoS requirement.

The CRs to implement the above changes are provided in document SP-030459.

5.2 Multimedia Messaging Service (22.140, 22.038)

The MMS SWG in SA1 had a very busy meeting at the last SA1. Resulting from this, three CRs are being presented to 22.140 and one to 22.038.

5.2.1 MMS 22.140

Management of Hyperlinks with MMS
Currently there is no requirement defined to transfer hyperlinks using multimedia messages. High potential is seen by SA1 mainly for two reasons. First the user is well experienced by using links for mobile internet access with advanced terminal capabilities recently emerging on the market. Second a hyperlink may reference to further mobile services e.g. mobile office, organizer, streaming and SIP addresses which lead to increased user convenience for further upcoming Rel-6 services.

Conditional delivery behaviour
In certain situations the user may want to modify the delivery mechanism according to a set of network, MMS and terminal parameters. This change request introduces a new requirement to allow the user to specify a per message delivery mechanism. The change request also states that the network can set up a default mechanism for the users in order to improve the MMS experience.

These two CRs to 22.140 are provided in document SP-030460.

5.2.2 MM storage in the USIM (22.140, 22.038)

Some operators are very aware they could benefit from using USIM storage capacity to store MM and/or elements of it.

Some examples are:

- Build an MM using elements stored on the card (images, text…)
- “Ready to send” cards. These are preformatted messages easy and fast to send, from a user library or an operator library (written during card personalization or downloaded). The user just picks in a menu a pre-formatted MM, which is directly sent to the given destination.
- Template messages to fill and send. Different templates could be provided for different occasions (e.g. Birthday cards), with only a text to add. Special advertising from stored operator’s template could be added automatically and sent with each MM. Operators can have them installed during card personalization or use OTA download.

There are two change requests provided to implement this requirement; one to 22.140 and the other to 22.038.

It should be noted that Nokia had indicated an objection to the CRs on the grounds of bad user experience (22.140) and for the same technical reasons related to the memory storage capabilities of the currently existing cards (22.038).

Nonetheless, there was pressure from operators to include this requirement and so the two CRs are presented in document SP-030461 for approval.

5.3 Criteria for "change of position" procedures in CAMEL (22.078)

Currently, if the associated DPs are armed, the CAMEL "Change of position" procedures for mobile originating/terminating subscribers report handover events unconditionally.

There was concern by operators and manufacturers that if reporting is performed each time a handover occurs the signalling load would increase substantially. Also the original intention, when this feature was proposed, was to distinguish the tariff if the subscriber's location was within a certain area, GSM/UMTS system or network. For these reasons, the current unconditional reporting would be more harzardous than beneficial.

To solve the problem and meet the original intention of the introduced feature, the CSE should instruct the VPLMN to report only when the subscriber moves to the intended area or network.

Hence SA1 is proposing a CR to 22.078 in document SP-030462 for approval.

5.4 Wireless LAN (WLAN)

5.4.1 22.934

Deletion of Software SIM concept
Some time ago, SA1 investigated on the possiblity of authentication without the use of SIM/USIM. As no contributions on this issue have been received before the deadline fixed during the SA1 #18 meeting in Pusan, the meeting took the decission that this requirment is only for scenario 1 and out of scope of 3GPP.

This was announced in the SA1 #21 Seoul meeting and was carried out at the last meeting of SA1.

Service Capability Interworking
The TR 22.934 contains a list of 3GPP services that need to be interworked to. Many of the service capabilities have no identified use case, which indicates that there is no need to provide interworking to from a WLAN. Removal of these service capabilities from the list will provide a clear indication of what service capabilities require interworking to be defined.

The CRs to implement the above changes are provided in document SP-030463 for approval.

5.4.2 ODB and WLAN (22.041)

Clarification of WLAN access point terminology
ODB provides a level of protexction for network operators against fraudulent users and

also the capability to selectively bar subscribers from services. Clause 5.3 has an explanation of the term "access point" for clarification which is incorrect. The "GGSN or part of the GGSN that is specified by a particular APN" is incorrect as the Stage 2 (TS23.934) defines the Packet Data Gateway (PDG) as hosting the access point. The PDG provides the Wi interface which has the same characteristics as the Gi. To provide for the PDG to fulfill its function and to permit ODB the GGSN specific text must be updated.

ODB in VPLMN for WLAN user
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. The CR builds on the existing requirements by including the capability to bar subscribers from access to packet oriented services in the VPLMN when connected by I-WLAN and also to bar subscribers from use of access points within the I-WLAN (i.e. WLAN directly internet access).

The two CRs to 22.041 are provided in document SP-030464.

5.5 Clarification on the meaning of Access Independence (22.228)

For some time unecessary debate has been created by vague interpretations of the term access independence. At one extreme the interpretation is that 3GPP must consider every access technique that could possible carry an IP connection to the other extreme that IMS is only compatible with GERAN/UTRAN access.

SA1 has now taken a step to clarify that access independence means that IMS should be developed as an IP solution but that 3GPP should only take care of interoperability to accesses under it’s control i.e. GERAN/UTRAN/ I-WLAN.

The CR to implement this is provided in document SP-030465 for approval.

5.6 Packet-switched streaming service (22.233)

Removal of content cache information in PSS architecture
It has been identified that it is not possible for SA4 to realise the architectural change from introducing content cache as 3GPP network elements within Rel 6 time frame. Therefore, is necessary to remove it from the TS.

Reliable delivery mechanism
In section 5.4 on Transport, the TS indicates that PSS should provide a reliable delivery mechanism that enables the user to receive the content without any errors due to the transport mechanism. However, it is not clear if, for instance, this should apply to live transfers. This CR clarifies what is meant.

The two CRs are provided in document SP-030466 for approval.

5.7 Service Aspects Charging and billing (22.115)

It has been brought to SA1’s attention that 22.115 does not conform to the PNE rules for drafting TSs. Scattered throughout the document, the word “must” is used where it should be “shall”. Therefore, CR 22.115-014 aligns the TS with 21.801.

Currently there is no requirement specified for the determination of user data and user protocols over CS interconnection circuits, thus preventing identification and differential

charging for multi-media services e.g. video-telephony. Hence, this is included in CR 22.115-015.

The two CRs are provided in document SP-030467 for approval.

5.8 Speech recognition framework for automated voice services (22.243)

SA1 had a long and involved discussion at the last meeting on reconstructed speech as an output mechanism. Two documents were presented to SA1 with differing solutions in response to the CR that was sent back from SA.

There were several aspects to this discussion such as the quality of the speech; one proposal indicates that the speech should be intelligible rather than to be able to identify the speaker. Speech recognition was not intended to be an authentication mechanism and so again itelligibility is the key, not user recognition.

After some discussion, during which the same arguments were reconstructed, a proposal was adopted and is provided here in document SP-030468.

It should be noted that Motorola still had some reservations on the CR and stated that they may wish to raise again at SA.

5.9 Generic User Profile (22.240)

At the last SA1, it was noticed that the GUP TS needed to be cleaned up a little to ensure that it was clear. This was done and was presented to SA1 the result of which is provided in document SP-030469 for approval.

6 New TSs/TRs

SA1 has two TRs to present, one for information and the other for approval.

6.1 Priority Service Guide (22.952)

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

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

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

The outstanding Issues are:

- A need to consider requirements to support roaming between eMLPP and Priority Service only networks.
- Also, this version should be reviewed by SA2, SA5, CN, RAN, T and GERAN WGs to get feedback on the service, network, and radio aspects (this has been done in document S1-030935).

A revised version of this document is intended to be sent to TSG-SA#22 (12/2003) for Approval. In the meantime, it is presented in document SP-030470 for information.

6.2 IMS Subscription and access scenarios (22.800)

Work in the SA1 IMS group on IMS Subscription and access scenarios has progressed well since it was presented to SA #19 for information.

The TR studies scenarios between subscribers and operators, mainly from IMS subscriptions point of view and verifies the compatibility of the possible scenarios within 3GPP Scope. Release 6 includes several work items like IMS enhancements, WLAN interworking that needs to be better understood so that clear requirement can be agreed and relevant technical specifications can be developed in time.

The changes since last presentation to TSG-SA Meeting #19:

1) Conclusions chapter has been added including SA1's judgement on the scope of each scenario for 3GPP.
2) Scenarios were clarified
3) Description of Access Independence clarified

There is one outstanding issue, namely: Section 13.6: Roaming aspects for scenario "Non-3GPP access scenario with roaming"

Regarding contentious issues, SA1 has not been able to agree whether or not the Multiple IMS scenario in section 7 and 8 is within the scope of 3GPP. The fundamental issue is whether requirements can be put on the 3GPP CN in order for it to be capable of supportïng an operator, which is only operating an IMS.

Nonetheless, SA1 consider the report stable enough for it to be approved and any outstanding or contentious issues can be done once it is under change control. It is presented for approval in document SP-030471.

6.3 MBMS User Services (22.246)

Within SA1 work has been progressing to define the MBMS requirements necessary for SA4 to specify the codec(s) and protocols required for MBMS, according to the WID originally approved at SA#20 within SP-030347. These requirements are being defined within TS 22.246 and SA1 has decided to update the title of this TS from its previous title of 'MBMS Scenarios and requirements' to 'MBMS User Services'.

The TS is now more than 50% complete and is ready for presentation for information in document SP-030511 to SA.

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

Regarding the timescales of the MBMS work in SA1, it is intended to meet the current timescales for completion of the work and send the TS for approval in December dependent on the outstanding issues being resolved.

7 WIs from SA1

SA1 has one WI to present for approval.

7.1 The 3GPP Generic User Profile (updated)

The last time that the GUP WI was changed was in SA #18. Since then a number of changes have been made:

- addition of Data Description Method has been put into Linked Work Items;
- TS 23.241 and TS 24.241 have been removed from the table of expected output and time scale of new specifications (clause 10);
- the time scale of approval of TS 22.240 (GUP stage 1) has been changed from plenary #18 to plenary #19 (clause 10);
- the schedule of TS 23.240 has been updated as informed by SA2 in their LS in S1-030210 (clause 10);
- duplicated clauses 11 and 12 have been removed;
- the names of the rapporteurs of TS 23.241 and TS 24.241 have been removed (clause 11);
- the secondary work item leadership of T2 work group has been removed (clause 12); and,
- the reference to VHE has been removed.

It is presented for approval in document SP-030472.

8 Other Issues

There are no other issues at this time.

9 Meetings of SA1

9.1 Meetings since last SA

The following meetings have been held since SA #20.

Meeting	Date	Place	Host
SA1#21	07 - 11 July 2003,	Sophia Antipolis,	ETSI
MBMS ad hoc	6-8th August 2003,	Stains, UK	Samsung
Emergency Call ad hoc	25-26 August 2003,	Phoenix, Arizona	Lucent Technologies

9.2 Planned meetings

SA1 has the following meetings scheduled, so far.

SA1 Plenary

Meeting	Date	Place	Host

SA1#22	27 - 31 October 2003,	Bankok, Thailand	Japanese Friends of 3GPP
SA1#23	12 -16 January 2004	Europe	T.B.A.
SA1#24	19 - 23 April 2004	Asia, China	ZTE
SA1#25	28 June - 02 July 2004	North America	NA friends of 3GPP
SA1#26	11 - 15 October 2004	Europe	European friends of 3GPP

SA1 SWGs

MBMS joint ad hoc	13 – 14 October 2003	Baden, Austria	T-Mobile International

Annex 1: Documents provided to this Plenary

Tdoc	Title	Agenda
SP-030452	Presentation of SA1 to SA #21	7.1.1
SP-030453	Status report of SA1 to SA #21	7.1.1
SP-030492	CRs to 22.101 on Modification of emergency number identification rules (R99, Rel-4, Rel-5, Rel-6)	7.1.3
SP-030455	CRs to 22.071 on Correction of requirements on the identity format of LCS clients (Rel-4, Rel-5 and Rel-6)	7.1.3
SP-030456	CRs to 21.905 on to correct the Defintion of CDR (Rel-5, Rel-6)	7.1.3
SP-030457	CRs to 22.101 on Clarification on USIM-based access to IMS (Rel-5, Rel-6)	7.1.3
SP-030458	CR to 22.078 to align stage 1 with stage 2 & stage 3 (Rel-5)	7.1.3
SP-030459	Assorted CRs to 22.071 on Location Services (Rel-6)	7.1.3
SP-030460	Assorted CRs to 22.140 on MMS (Rel-6)	7.1.3
SP-030461	CRs to 22.140 and 22.038 on MM storage in the USIM (rel-6)	7.1.3
SP-030462	CR to 22.078 on criteria for "change of position" procedures in CAMEL (Rel-6)	7.1.3
SP-030463	Assorted CRs to 22.934 on Wireless LAN (Rel-6)	7.1.3
SP-030464	CRs to 22.041 on ODB and WLAN (Rel-6)	7.1.3
SP-030465	CR to 22.228 to clarify the meaning of Access Independence	7.1.3
SP-030466	Assorted CRs to 22.233 on Packet-switched streaming service (Rel-6)	7.1.3
SP-030467	Assorted CRs to 22.115 on Service Aspects Charging and billing (Rel-6)	7.1.3
SP-030468	CR to 22.243 on Speech recognition framework for automated voice services (Rel-6)	7.1.3
SP-030469	CR to 22.240 on Generic User Profile (Rel-6)	7.1.3
SP-030470	Priority Service Guide (22.952) for information	7.1.3
SP-030471	IMS Subscription and access scenarios (22.800) for approval	7.1.3
SP-030511	MBMS User Services (22.246) for Information	7.1.3
SP-030472	Updated WI for GUP	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-21	SP-030456	21.905	051	-	Rel-5	F	Correction of the Defintion of CDR	5.7.0	5.8.0	S1-030970
SP-21	SP-030456	21.905	052	-	Rel-6	A	Correction of the Defintion of CDR	6.3.0	6.4.0	S1-030971
SP-21	SP-030461	22.038	014		Rel-6	B	MMS support by the USIM Application Toolkit	6.0.0	6.1.0	S1-030887
SP-21	SP-030464	22.041	010	-	Rel-6	C	WLAN access point terminology clarified	6.0.0	6.1.0	S1-030915
SP-21	SP-030464	22.041	011	-	Rel-6	B	ODB in VPLMN for WLAN user	6.0.0	6.1.0	S1-030901
SP-21	SP-030455	22.071	054	-	Rel-4	F	Correction of requirements on the identity format of LCS clients	4.4.1	4.5.0	S1-030943
SP-21	SP-030455	22.071	055	-	Rel-5	A	Correction of requirements on the identity format of LCS clients	5.1.1	5.2.0	S1-030944
SP-21	SP-030455	22.071	056	-	Rel-6	A	Correction of requirements on the identity format of LCS clients	6.4.0	6.5.0	S1-030945
SP-21	SP-030459	22.071	057	-	Rel-6	C	Clarification of Mobile Originating Location	6.4.0	6.5.0	S1-030946
SP-21	SP-030459	22.071	058	-	Rel-6	B	A requirement of authentication to the Target UE user	6.4.0	6.5.0	S1-030947
SP-21	SP-030459	22.071	059	-	Rel-6	B	Introduction of LCS QoS Classes	6.4.0	6.5.0	S1-030948
SP-21	SP-030462	22.078	160		Rel-6	F	Criteria for "change of position" procedures	6.1.0	6.2.0	S1-030727
SP-21	SP-030458	22.078	161		Rel-5	F	Alignment of stage 1 with stage 2 & stage 3	5.10.0	5.11.0	S1-030956
SP-21	SP-030457	22.101	127	-	Rel-5	F	Clarification on USIM-based access to IMS	5.10.0	5.11.0	S1-030910
SP-21	SP-030457	22.101	128	-	Rel-6	A	Clarification on USIM-based access to IMS	6.4.0	6.5.0	S1-030911
SP-21	SP-030454	22.101	129		R99	F	Modification of emergency number identification rules in 22.101 R99	3.14.0	3.15.0	S1-031044
SP-21	SP-030454	22.101	130		Rel-4	A	Modification of emergency number identification rules in 22.101 Rel-4	4.7.0	4.8.0	S1-031045
SP-21	SP-030454	22.101	131		Rel-5	A	Modification of emergency number identification rules in 22.101 Rel-5	5.10.0	5.11.0	S1-031046
SP-21	SP-030454	22.101	132		Rel-6	C	Cleanup and modifications on identification of emergency numbers in 22.101 Rel-6	6.4.0	6.5.0	S1-031049
SP-21	SP-030467	22.115	014	-	Rel-6	D	Alignment of 22.115 with 21.801	6.1.0	6.2.0	S1-030764
SP-21	SP-030467	22.115	015	-	Rel-6	B	CS interconnection requirement for the identification of user data rate and user protocol at the interconnection point for charging purposes	6.1.0	6.2.0	S1-030976
SP-21	SP-030460	22.140	035	-	Rel-6	B	Management of Hyperlinks with MMS	6.2.0	6.3.0	S1-030883
SP-21	SP-030461	22.140	036	-	Rel-6	B	MM storage in the USIM	6.2.0	6.3.0	S1-030950
SP-21	SP-030460	22.140	037	-	Rel-6	B	Conditional delivery behaviour	6.2.0	6.3.0	S1-030925

SP-21	SP-030465	22.228	021	-	Rel-6	F	Clarification on the meaning of Access Independence	6.3.0	6.4.0	S1-030906
SP-21	SP-030466	22.233	011	-	Rel-6	C	Removal of content cache information in PSS architecture	6.2.0	6.3.0	S1-030962
SP-21	SP-030466	22.233	012	-	Rel-6	C	Reliable delivery mechanism	6.2.0	6.3.0	S1-030963
SP-21	SP-030469	22.240	001		Rel-6	F	Clarifications for section 7 of 22.240	6.0.0	6.1.0	S1-030965
SP-21	SP-030468	22.243	007	-	Rel-6	B	Reconstructed speech as an output mechanism	6.3.0	6.4.0	S1-030974
SP-21	SP-030463	22.934	003	-	Rel-6	C	Deletion of Software SIM concept	6.1.0	6.2.0	S1-030716
SP-21	SP-030463	22.934	004	-	Rel-6	C	Service Capability Interworking	6.1.0	6.2.0	S1-030761

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			
02.71	Location Services (LCS); Stage 1					7.3.0				
02.72	Call Deflection Service description; Stage 1					7.2.1				
02.78	Customized Applications for Mobile network Enhanced Logic (CAMEL); Service definition (Stage 1)			5.6.0	6.6.1	7.2.0				
02.79	Support of Optimal Routeing (SOR); Service definition (Stage 1)			5.2.0	6.0.0	7.0.0				
02.81	Line Identification Supplementary Services; Stage 1		4.6.1	5.1.0	6.0.0	7.0.0				
02.82	Call Forwarding (CF) Supplementary Services; Stage 1	3.6.1	4.5.2	5.0.0	6.0.0	7.0.1				
02.83	Call Waiting (CW) and Call Hold (HOLD) Supplementary Services; Stage 1		4.6.7	5.0.0	6.0.0	7.0.0				
02.84	MultiParty (MPTY) Supplementary Services; Stage 1		4.4.7	5.0.0	6.0.0	7.0.0				
02.85	Closed User Group (CUG) Supplementary Services; Stage 1		4.2.6	5.0.0	6.0.0	7.0.0				
02.86	Advice of Charge (AoC) Supplementary Services; Stage 1		4.1.5	5.0.0	6.0.0	7.0.0				
02.87	User-to-User Signalling (UUS) Service Description; Stage 1					7.1.2				
02.88	Call Barring (CB) Supplementary Services; Stage 1	3.6.1	4.4.3	5.0.0	6.0.0	7.0.0				
02.90	Unstructured Supplementary Service Data (USSD); Stage 1		4.1.1	5.1.0	6.0.0	7.0.0				
02.91	Explicit Call Transfer (ECT)			5.1.1	6.0.0	7.0.0				
02.93	Completion of Calls to Busy Subcriber (CCBS) Service Description; Stage 1				6.0.1	7.0.0				
02.94	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	4.5.0	5.7.0	6.3.0
22.001	Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN)						3.2.0	4.3.0	5.0.0	
22.002	Circuit Bearer Services (BS) supported by a Public Land Mobile Network (PLMN)						3.6.0	4.2.0	5.0.0	
22.003	Circuit Teleservices supported by a Public Land Mobile Network (PLMN)						3.3.0	4.3.0	5.2.0	
22.004	General on supplementary services						3.3.0	4.2.0	5.0.0	
22.011	Service accessibility						3.8.0	4.8.0	5.1.0	6.1.0
22.016	International Mobile Equipment Identities (IMEI)						3.3.0	4.2.1	5.0.0	

22.024	Description of Charge Advice Information (CAI)						3.0.1	4.0.0	5.0.0	
22.030	Man-Machine Interface (MMI) of the User Equipment (UE)						3.4.0	4.1.0	5.0.0	
22.034	High Speed Circuit Switched Data (HSCSD); Stage 1						3.2.1	4.1.0	5.0.0	
22.038	USIM/SIM Application Toolkit (USAT/SAT); Service description; Stage 1						3.3.0	4.2.0	5.3.0	6.0.0
22.041	Operator Determined Call Barring						3.3.1	4.1.0	5.0.0	6.0.0
22.042	Network Identity and Time Zone (NITZ) service description; Stage 1						3.0.1	4.2.0	5.1.0	
22.057	Mobile Execution Environment (MExE) service description; Stage 1						3.0.1	4.1.0	5.4.0	
22.060	General Packet Radio Service (GPRS); Service description; Stage 1						3.5.0	4.4.0	5.3.0	6.0.0
22.066	Support of Mobile Number Portability (MNP); Stage 1						3.2.0	4.0.0	5.1.0	6.1.0
22.067	enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 1						3.0.1	4.1.0	5.0.0	6.1.0
22.071	Location Services (LCS); Stage 1						3.4.0	4.4.1	5.1.1	6.4.0
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;						3.2.0	4.1.0	5.0.0	

	Service description - Stage 1									
22.100	UMTS Phase 1						3.7.0			
22.101	Service aspects; Service principles						3.14.0	4.7.0	5.10.0	6.4.0
22.105	Services and service capabilities						3.10.0	4.3.0	5.2.0	6.2.0
22.115	Service Aspects Charging and billing						3.3.0	4.0.0	5.3.0	6.1.0
22.121	Service aspects; The Virtual Home Environment; Stage 1						3.3.1	4.1.1	5.3.1	
22.127	Service Requirement for the Open Services Access (OSA); Stage 1							4.4.0	5.5.0	6.3.0
22.129	Handover requirements between UTRAN and GERAN or other radio systems						3.6.0	4.4.0	5.2.0	6.0.0
22.135	Multicall; Service description; Stage 1						3.4.0	4.2.0	5.0.0	
22.140	Multimedia Messaging Service (MMS); Stage 1						3.1.0	4.3.0	5.4.0	6.2.0
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	6.3.0
22.233	Transparent end-to-end packet-switched streaming service; Stage 1								5.0.0	6.2.0
22.240	3GPP Generic User Profile (GUP); Stage 1									6.0.0
22.242	Digital Rights Management (DRM); Stage 1									6.2.0
22.243	Speech recognition framework for automated voice services; Stage 1									6.3.0
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 Wireles Local Area Network (WLAN) interworking									6.1.0
22.940	IP Multimedia Subsystem (IMS) messaging; Stage 1									6.0.0
22.944	Service requirements for UE functionality split								5.1.0	
22.949	Study on a generalized privacy capability									0.1.0
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			
22.977	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	