

3GPP TSG SA WG3 Security — S3#16

S3-000641

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Sophia Antipolis, France

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Bart Vinck (standing, left) receiving a big "thankyou" for all his hard work and support for SA WG3



The White House, Washington D.C.

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1 Opening of the meeting

The Chairman, Prof. Michael Walker, welcomed delegates to the 15th SA WG3 meeting, in Washington D.C., USA, hosted by Lucent, Qualcomm and TIA.

2 Meeting objectives

The Chairman outlined the objectives, the primary being to complete the R99 CRs for presentation and approval by SA#09. Secondary objective was to progress the R00 work in order to lead to early stabilisation of the R00 Security work.

3 Approval of the agenda

The draft agenda, provided in TD S3-000501 was **approved** without changes.

4 Registration and assignment of input documents

The available documents were allocated to their respective agenda items.

5 Approval of report from S3#14

The report was considered and modified slightly, following comments made and the updated version (version 1.0.0) was approved.

The actions from the meeting were considered:

ACTION #14/1: Chairman: Reports of SMG#31bis and SA#08 to be checked for GEA2 decisions and clarification to SA#08 Report to be proposed if necessary.
This action was **completed**. A clarification was not considered necessary because the reference to SP-000322 contains the cut-off date for the introduction of GEA2 (end of 2002).

ACTION #14/2: M. Pope to check on 3GPP FTP site access restrictions and to verify what will happen to the SMG10 FTP area when the transfer is completed. Also to check for e-mail list subscription restriction for SA WG3 and the new LI SWG group.
This action was **ongoing**. It was also discussed whether the SMG10 documents should be transferred to the 3GPP site. It was decided to leave them on the ETSI restricted site in an archive.

ACTION #14/3: C. Blanchard to check TD S3-000411 against TS 33.103.
This action was **completed** by the input documents to this meeting.

ACTION #14/4: P. Howard to present more information on the LS in TD S3-000437 at SA WG3 Meeting#15.
This was **to be completed in this meeting**. (**completed**)

ACTION #14/5: All delegates to consider whether the external evaluation can be dropped from the work plan.
This was revisited under agenda item 6.4 (SAGE). (**completed**)

ACTION #14/6: All Operators to check whether an example produced by SAGE is acceptable to use a 64 bit RES.
This was to be considered under agenda item 6.45 (SAGE). (**completed**)

ACTION #14/7: All delegates to consider how to ensure that high quality pseudo-random generators are used for generation of RAND.
This was reviewed under agenda item 6.4 (SAGE). (**completed**)

C. Brookson agreed to ask the GSMA whether they would contribute their document on RAND generation to SA WG3.

ACTION #15/1: C. Brookson to ask the GSMA whether they would contribute their document on RAND generation to SA WG3.

- ACTION #14/8: All: To consider all the WIs marked in Italics in TD S3-000470 for providing support at SA WG3 meeting #15.
This was considered under agenda item 8.4. ([completed](#))
- ACTION #14/9: M Pope to update the Work Plan and distribute to SA WG3 for comment.
Not completed. The work plan to be considered again for update at this meeting under agenda item 8.4. ([ongoing](#))
- ACTION #14/10: All: The Pros and Cons of mechanisms (e.g. AKA) to use should be discussed (via e-mail) and developed, in order to agree a solution at SA WG3 Meeting #15. V. Niemi to lead the e-mail discussion and produce a document outlining the issues and agreements reached for Meeting #15. [Completed](#) (TD S3-000588)
- ACTION #14/11: C. Blanchard to provide the definitive SIP documentation and the changes being made to the e-mail list. [Completed](#) (TD S3-000576)
- ACTION #14/12: All: The Pros and Cons of the architecture proposed in TD S3-000434 should be discussed (via e-mail) and developed, in order to agree a solution at SA WG3 Meeting #15. G Koien to lead the e-mail discussion and produce a document outlining the issues and agreements reached for Meeting #15.
Discussion groups were held over e-mail. ([completed](#))
- ACTION #14/13: All: The Pros and Cons of the core network security protocols proposed in TD S3-000444 should be discussed (via e-mail) and developed, in order to agree a solution at SA WG3 Meeting #15. G Koien to lead the e-mail discussion and produce a document outlining the issues and agreements reached for Meeting #15.
Discussion groups were held over e-mail. ([completed](#))
- ACTION #14/14: France Telecom to update TD S3-000468 to clarify the mechanism for more scenarios.
TD S3-000497 created, which was superseded by [TD S3-000522](#) which was discussed at the meeting ([completed](#)).
- ACTION #14/15: P. Howard to collect together the arguments for/against, from the 3GPP perspective, the TR-45 Home Control features, for discussion at joint SA WG3#15/TR-45 AHAG meeting.
All: Send arguments to P. Howard. This was to be discussed at the joint AHAG meeting. ([completed](#))
- ACTION #14/16: M Marcovici to collect together the arguments for, from the 3GPP2 perspective, the TR-45 Home Control features, for discussion at joint SA WG3#15/TR-45 AHAG meeting.
This was to be discussed at the joint AHAG meeting. ([completed](#))
- ACTION #14/17: B Vinck to produce a CR to 33.103 to make it consistent with HFN values in TS 33.102, for presentation at SA WG3 Meeting #15. **Open.**
- ACTION #14/18: M Pope: If S3-000381 was not sent: to send modified version in TD478.
(LS in TD S3-000478 was sent). ([completed](#))

6 Reports / Liaisons

6.1 3GPP plenary

The Chairman reported the ETSI News Release on the Confidentiality and Integrity algorithm, stating that it has now been published on the 3GPP web site. This news was welcomed by SA WG3.

6.2 3GPP WGs

[TD S3-000502](#): Response to LS (R2-001541) on Parameters to be stored in the USIM (Original LS: T3-99304). Initial feelings were that the potential problem existed in GSM, but was not a significant problem. The document was [noted](#), and no problems were raised and it was [agreed](#) that the old keys/parameters do not need to be stored in the USIM.

[TD S3-000503](#): Liaison statement on the modified lengths of parameters AUTN and AUTS. This confirms that the required changes had been included in 29.002 and was [noted](#).

[TD S3-000506](#): Response to LS (T3-000433) on Parameters to be stored in the USIM. This was copied to SA WG3 and responds that there was no problem with the proposals. This document was [noted](#).

TD S3-000507: LS from T3: Limitation of Lifetime of Keys CK and IK. This liaison states that a new USIM command would be needed for this and requests consideration of the implementation in the UE instead. This proposal was accepted after some consideration. A CR was already available in [TD S3-000589](#), which was revised in [TD S3-000603](#) (see agenda item 9.1). It was agreed to produce a reply liaison to T WG3 on this, which was provided in [TD S3-000594](#) which was **agreed**.

TD S3-000508: LS from T3: Encrypted USIM-ME interface. This was **noted**.

TD S3-000509: LS from T3: Support of Bookmarks / VHE User Profiles. This was noted. A liaison to inform T3 that SA WG3 will look at this in both the MExE and VHE contexts was agreed to be produced, provided in [TD S3-000595](#), which was revised in [TD S3-000628](#) and **approved**. The WI sheet was provided in [TD S3-000596](#) and was attached to this LS - see agenda item 8.3.

TD S3-000510: LS from T3: Clarification of UMTS-AKA for GSM R'99 Mobiles. ([TD S3-000584](#) is in agreement with this proposal, and T WG2 agree that GSM mobiles will have GSM authentication as per GSM 11.11 in [TD S3-000555](#)). It was agreed that there were no security implications on this, and that SA WG1 should respond on this. Valtteri Niemi agreed to produce a response LS to T WG3 and SA WG1 that SA WG3 would bring their work in line with the decisions of SA WG1. This was provided in [TD S3-000597](#), which was modified slightly in [TD S3-000629](#) which was **approved**. A CR to 33.102 was prepared to cover this in [TD S3-000598](#) which was discussed. It was considered premature to agree this CR at this time, and more work is required (the CR was **rejected**).

TD S3-000517: Liaison statement on the introduction of GEA2 (N1-001023). The information on the work of CN WG1 was **noted**, in particular, that GEA2 can only be switched on if all SGSN nodes in the network are upgraded to R99.

TD S3-000518: Response to LS on Support of additional GPRS ciphering algorithms (N1-000971). The CRs related to the work reported in [TD S3-000517](#) were reported for information in this document, which was **noted**.

TD S3-000519: UE-Triggered Re-Authentication (N1-001044). This acknowledges that the work in CN WG1 for UE triggered authentication will be done. This confirms that the required changes had been included in 24.008, and was **noted**.

TD S3-000520: LS from CN WG1 to CN WG4: Answer to the liaison statement on the modified lengths of parameters AUTN and AUTS. This was **noted**.

TD S3-000521: Liaison statement to S3 on evaluation of the impact on positive authentication reporting on network performance. This was superseded by [TD S3-000527](#) which was dealt with in the joint meeting (agenda item 7).

TD S3-000523: Liaison Statement on preventing unciphered writing/overwriting of pre-configuration fields by the HPLMN. This proposes that configuration information is kept on the USIM and only accepts updates over an encrypted link to alleviate Denial of Service attacks. It was considered that this threat could also be present for GSM-GSM handover. Ciphering would not eliminate the threat, but would make the attack more difficult; there may be many other attacks which can have similar results in the GSM domain. P. Howard agreed to draft a response on this, contained in [TD S3-000593](#) which was modified slightly in [TD S3-000630](#) and **approved**.

TD S3-000526: LS from T WG2: RE: Applications on external devices. It had been decided at meeting #14 that there was likely to be security concerns, but that SA WG3 would consider the security issues once the requirements are stable in other groups. This document was then **noted**.

TD S3-000527: Liaison statement on Positive Authentication Reporting. It was agreed that this subject would be discussed in order to provide AHAG with the impact and acceptability of positive authentication reporting in 3GPP systems. SA WG3 understanding of the issues are:

1. *N4 does not have a clear view on whether this functionality is required for R99 or for R00.* It was confirmed that this would be a Release 2000 requirement.
2. *What protocol would be used between 3GPP VLR/SGSNs and 3GPP2 HLRs?* No protocol is currently defined, but is outside of the scope of SA WG3.
3. *How does the VLR/SGSN know that the subscriber is a 3GPP2 subscriber?* The subscriber type is not known, but this will not be a mandatory feature in 3GPP HLRs, so should not be requested by 3GPP HLRs.
4. *How can the HLR request authentication report from the VLR/SGSN?* SA WG3 would consider that

the authentication vector is the appropriate place, but the details would be elaborated later.

It was agreed to produce a response to these questions, which was provided in [TD S3-000605](#) which was **agreed**.

The content of this document ([TD S3-000527](#)) was taken into account in the liaison provided in [TD S3-000594](#) (see above)

[TD S3-000555](#): LS from T WG2 - Re: Clarification on UMTS AKA for SIM (GSM R99 Mobiles?). It was **agreed** that SA WG3 would follow the SA WG1 requirements. See also the discussion on [TD S3-000510](#).

[TD S3-000583](#): LS from WAP/TSG-T3 WAP SAT interoperation Ad Hoc: Security model in GSM 03.48 / TS 23.048 (replacement of [TD S3-000575](#)). This document was introduced by Mr. N. Barnes, which informs that a “many-to-one” solution for secure communication to and from the SIM Application Toolkit may be required, and invite SA WG3 to consider and comment on the security implications of this with respect to GSM 03.48. The SAT WI rapporteur, P. Howard was asked to consider the impact of this proposal and identify any work needed under the SAT WI (provided in [TD S3-000599](#) see agenda item 8.3).

[TD S3-000581](#): LS from ITU-T on IMT2000 Security Management (= S3-000437). It was agreed that a liaison statement would be produced by a drafting group for consideration by SA WG3, provided in [TD S3-000600](#) which was presented by C. Brookson and **agreed**.

[TD S3-000582](#): LS from SA WG4 (cc SA WG3): Response LS to TSG-SA on Call Control Applications in External Devices. This liaison was considered in the same way as [TD S3-000526](#) and **noted**.

[TD S3-000584](#): Support of UMTS AKA for GSM only R99 mobiles. It was **agreed** that SA WG3 would follow the SA WG1 requirements. See also the discussion on [TD S3-000510](#).

6.3 Lawful interception sub-group

[TD S3-000543](#): 3G TS 33.106 V3.1.0 - Release2000 draft rev. This is an initial draft for Release 2000 Lawful Interception requirements. The modifications were presented to the meeting by Mr. B McKibben, Chairman of the SA WG3 LI group, and some comments were made. The document will be further elaborated by the LI group and a Release 2000 CR presented to SA WG3 at a future meeting for approval. The document was **noted**.

[TD S3-000542](#): Draft Report of the 3GPP TSG SA WG3-LI (S3-LI) meeting #4/00 on lawful interception. This was summarised by the Chairman of the LI group. A version of 33.107 (Release 2000) was expected in November and it is hoped to provide a version for approval in March 2001, although this time schedule is considered aggressive by the LI group. The future meetings of the group were provided for information: Nov 27-30 Israel; Jan 23-25 Koln, Feb 20-22, (host needed). The report was **noted**.

[TD S3-000541](#): Report of the 3GPP TSG SA WG3-LI (formerly SMG10-WPD) meeting #3/00 on lawful interception. This was provided for information and was **noted**.

The LI group were thanked for their work and for the report to SA WG3.

6.4 SAGE

Peter Howard provided a verbal report, based upon a short e-mail report he had received from Per Christoffersson.

- An operator variant key (OP) should be individual to each card to give good protection against DPA. One way to accomplish this, which is being discussed, is to use OPc, where OPc is the encryption of the secret operator key OP under the subscriber key K. OPc is then stored rather than OP. An alternative would be to store OP and derive OPc when required, although some advantages are lost with this approach.
- The working assumption is that the kernel function will work in a counter mode so the calculations of f1-f5 can be done independently and in an arbitrary order. Does this impact USIM-ME interface?
- SAGE are assuming that the calculation of the anonymity key for re-synchronisation takes RAND as an input rather than MACS (CRs have been prepared at this meeting by Siemens).
- SAGE prefer to limit RES to 64 bits (see discussions below).
- The working agreement is that Rijndael (an AES candidate) will be used as the kernel function.

Example 64-bit RES: SAGE had asked SA WG3 to consider whether an example for the Kasumi algorithm could use 64 bit RES (See action point 14/6 from previous meeting). The use of the 64-bit RES was considered acceptable for the example.

Creation of f0 (RAND) by SAGE: It was agreed that this would not be required as the requirements for RAND are not well specified.

External evaluation of the AKA algorithm: It was agreed that the need for external evaluation would not be needed, if the algorithm was publicly available. It was agreed that the algorithm should be published as soon as possible, in order to allow for some evaluation. Volunteers would be asked to evaluate the algorithm when published. The Chairman agreed that this would be raised at TSG SA to encourage evaluation when available.

V. Niemi agreed to produce a liaison answering the questions as outlined above, provided in [TD S3-000602](#), this was modified slightly in [TD S3-000631](#) and **agreed**.

6.5 Others (ETSI MSG, GSMA, GSM2000, T1P1, TIA, TR-45, AHAG)

ETSI MSG: It was reported that Francois Coureau had been elected Chairman of MSG.

GSMA and GSM 2000: [TD S3-000619](#): Report of GSM 2000 Security Meeting No. 9. This was presented briefly by C Brookson, and delegates are invited to read this report. The report was **noted**.

T1.P1: No reports were provided.

TIA: It was reported that this would be covered by TR-45 / AHAG reports.

TR-45/AHAG: [TD S3-000514](#), [TD S3-000515](#), and [TD S3-000516](#) were provided for information. Delegates were invited to read these reports off line. These documents were **noted**.

7 Joint meeting with AHAG

The draft agenda for this session was provided in [TD S3-000558](#).

The results of this meeting were discussed in the SA WG3 meeting.

[TD S3-000562](#): "Rogue MS shell" threats were considered. The document was noted.

[TD S3-000566](#): Home control requirements were considered:

- Revocation of AVs. The service affecting revocation was already supported using IST. On non-service affecting revocation, SA WG3 agreed that this should be discussed at the next SA WG3 meeting.
- Positive authentication reporting. Although this is not a requirement for 3GPP systems, the support of positive acknowledgement for 3GPP2 systems will be considered. If some way of determining the 3GPP/3GPP2 networks cannot be found, it may be necessary to include possibility for this to be requested by 3GPP networks (although this does not mean it will be used by 3GPP operators).

A Liaison statement reporting these agreements were provided in [TD S3-000604](#) which was modified slightly in [TD S3-000633](#) and **approved**.

[TD S3-000565](#): The joint session with AHAG/SA WG3 updated the proposed agreement for the co-operation on AKA maintenance in [TD S3-000565](#). This was updated, incorporated with [TD S3-000590](#) and made available in [TD S3-000591](#) which was **approved** for submission to SA for information.

8 Work programme

8.1 Review status of S3 specifications/reports

From Annex C of [TD S3-000501](#): The rapporteurs for GSM specifications were in need of updating. The specifications under SA WG3 control were considered as follows:

01.31 Tim Wright

01.33 Bernie McKibben

01.61 Michael Walker

02.09 Per Christofferson

02.31 Tim Wright

02.32 Tim Wright

02.33 Bernie McKibben

03.20 Sebastien

03.31 Tim Wright

03.33 Bernie McKibben

10.20 Bernie McKibben.

M Pope agreed to provide these to the database manager for correction.

8.2 Review R4/R5 work programme

[TD S3-000554](#): It was agreed that the Rapporteurs should meet to consider an update of this document and report changes back to SA WG3. This was not completed in time for the closing plenary, and it was agreed that an updated project plan would be attached to the report of the meeting.

AP 15/2: M Pope to attach updated project plan to the meeting report.

8.3 Status of security work items

[TD S3-000511](#): Proposed update of WI Network Domain Security. This updates the time plan to allow requirements capture over A, Iu and Iur interfaces (end November 2000).

It was proposed to exclude the A interface from this work. This was **agreed**.

GTP has missed its timescale, as no GTP CRs had been produced at this time. It was agreed to update the time plan to reflect reality on GTP work progress.

The updated WI sheet to be provided to TSG SA for information. The CAP requirements capture was removed from this timetable due to lack of resources to complete this. [TD S3-000606](#) was provided with the updated WI description, which was **approved**.

It was agreed that a liaison should be created to inform of the intended use of IPSec which was provided in [TD S3-000607](#): LS to CN WG4: Protection of GTP Messages using IPSec. This contains a proposal for a CR to GSM 09.60 / TS 29.060. This was modified slightly in [TD S3-000632](#) and **approved**.

[TD S3-000512](#): Proposed updated WI for CN Signalling Security. This was covered in the discussion of [TD S3-000511](#).

[TD S3-000522](#): Rejection of non ciphered connections. This proposes a parameter to control the rejection of non-ciphered connections:

default value 0 = reject non-ciphered connections

Temporary value 1= Accept non-ciphered connections.

The operator would choose the default setting (0 or 1) for terminals.

The user could temporarily change the parameter manually when prompted by the network.

Some discussion resulted, and the parameter was considered better provided on the SIM rather than the terminal, as the operators have control over the SIM and not the terminals on their network and could set the default to reflect their home network preferences. France Telecom / Telia were asked to re-draft the proposal to take this into account.

[TD S3-000579](#): WI description for supporting USIM toolkit security enhancements in T3. This was updated in [TD S3-000599](#) which was **agreed** with supporting companies Vodafone, Motorola, BT, Orange.

[TD S3-000580](#): WI description for P-TMSI signature stage 2 specification. This WI was a result of an action from the previous meeting, separating out the P-TMSI work. Timescales were for completion of the stage 2 specifications by meeting #16 (CRs to GSM 03.20). The changes to 33.102 mentioned was an error and it was agreed to remove this from the final version. The need for this WI was questioned. This should be investigated before completion of the work. [TD S3-000608](#) was provided for information and was **noted**.

[TD S3-000585](#): WI description for LCS security. The supporting companies should be added as for the LCS work item. With this, the updated WI, provided in [TD S3-000609](#), was **agreed**.

[TD S3-000596](#): WI description for VHE Security. This WI description sheet was produced as a result of discussions of [TD S3-000509](#). Supporting companies (BT, Motorola, Ericsson, France Telecom, Nortel Networks) were added and the WI, updated in [TD S3-000610](#) was **approved**.

[TD S3-000626](#): Work Item Description: Access security for IP-based services. The updated WI was **agreed**. AT&T were added to the supporting companies list.

8.4 New security work items

[TD S3-000570](#): WI proposal on UMTS network vulnerabilities to DoS attacks. This proposes a study phase to determine the Denial of Service attack threats from the future Internet connection to UMTS, and possible countermeasures. It was thought that the reference document should be the threats and requirements document (21.133), rather than to 33.900. The WI sheet was updated with this and supporting companies (Motorola, Lucent, BT, NTT DoCoMo) and provided in [TD S3-000611](#) which was **agreed**.

9 S3 specifications/reports

9.1 3G TS 33.102 Security architecture (R99)

[TD S3-000535](#): Proposed CR to 33.102: Clarifications on the START parameter handling. This CR was presented by Ericsson. The deletion in section 6.4.3 (last paragraph) of “by the ME” was discussed. It was finally agreed that deletion of this left the implementation open for T WG3 to specify how the START value is set. This will be clarified in TSG SA Plenary that this is an open issue. The CR was updated slightly to include some text of withdrawn CR in [TD S3-000544](#), provided in [TD S3-000615](#) which was **agreed**.

[TD S3-000544](#): Proposed CR to 33.102: START value handling for ME. This CR was **withdrawn** by Qualcomm due to a need to clarify the procedures, which caused a mis-understanding when creating the CR. (one change proposed by this CR was included in [TD S3-000615](#)).

[TD S3-000536](#): Proposed CR to 33.102: Start of ciphering. This CR was introduced by Ericsson. This was **agreed** (with a minor change from “DL” to “Downlink” and “UL” to “Uplink” in the version to be presented to TSG SA).

[TD S3-000537](#): Proposed CR to 33.102: Removal of ME triggered authentication during RRC connection. This CR was introduced by Ericsson and was **agreed**.

[TD S3-000538](#): Proposed CR to 33.102: New FRESH at SRNC relocation. This CR was introduced by Ericsson. A minor change was made and provided in [TD S3-000616](#), which was **agreed**.

[TD S3-000539](#): Proposed CR to 33.102: START value handling for MS with a GSM SIM inserted. This CR was introduced by Ericsson. After some discussion, it was decided that although a solution to this problem is needed, that this solution may not be ideal. The CR was **rejected**, and other solutions (e.g. based on the GPRS solution), should be sought.

[TD S3-000540](#): Proposed CR to 33.102: Removal of EUIC. This editorial CR was **agreed**, as it removes the functionality from Release 1999 as requested by TSG SA.

[TD S3-000545](#): Proposed CR to 33.102: Removal of duplicate text on USIM toolkit secure messaging and addition of a reference to 02.48 and 03.48 instead. This editorial CR was introduced by Vodafone and was **agreed**.

[TD S3-000546](#): Proposed CR to 33.102: Addition of authentication parameter lengths. This editorial CR was introduced by Vodafone and enhances the readability of the spec by showing the lengths of all parameters. The lengths were changed to show bits instead of octets, provided in [TD S3-000617](#) which was **agreed**.

[TD S3-000547](#): Proposed CR to 33.102: Removal of secure authentication mechanism negotiation. This CR was introduced by Vodafone. It was **agreed** as an editorial CR (Class D).

[TD S3-000548](#): Proposed CR to 33.102: Removal of HE control of some aspects of security configuration. This CR was introduced by Vodafone. It was **agreed** as an editorial CR (Class D).

[TD S3-000549](#): Proposed CR to 33.102: Removal of MS triggered re-authentication during connections. This CR was **withdrawn** as it was covered by another CR.

[TD S3-000550](#): Proposed CR to 33.102: Specification of authentication vector handling in serving network nodes. This CR was introduced by Vodafone. This CR should be provided to AHAG for information. It was **agreed** as an editorial CR (Class D).

AP 15/3: M Marcovici to send this to AHAG for information.

TD S3-000551: Proposed CR to 33.102: Refinement of requirements on sequence number checking on the USIM. This CR was **withdrawn** as it was covered by another CR.

TD S3-000552: Proposed editorial CR to 33.102: References. This CR was introduced by Siemens Atea and was **agreed**.

TD S3-000568: Proposed CR to 33.102: Profiles for sequence number management. This CR was based upon the principles outlines in **TD S3-000618**, which was the result of e-mail discussions the previous week. This document was introduced, and suggests that sequence number profiles are specified such that they can allow interoperability of a profile in different AuCs (suggested to be beneficial to both operators and vendors). The CR in **TD S3-000568** was noted to be a Class C to Release 1999. It was argued that this is to an informative Annex and does not affect any implementation, but would be beneficial to be included in Release 1999 for future interoperability. Some concern was expressed that providing different mechanisms without guidance on choosing a mechanism. After much discussion it was decided to discuss between interested parties off line to attempt to make progress on the issue. This was revisited at the closing plenary and reported that this was acceptable to all parties. It was agreed that this would be presented as a Release 1999 functional modification, and it would be explained in SA Plenary that this is an informative Annex which will in any case be used in Release 1999. The CR was then **agreed**.

TD S3-000569: Proposed CR to 33.102: Change of parameter value x regarding the capability of the USIM to store information on past successful authentication events. This CR was **agreed**.

TD S3-000572: Proposed CR to 33.102: Clarifications on the COUNT parameters. This CR was introduced by Ericsson and was modified slightly in **TD S3-000620** and was **agreed**.

TD S3-000573: Proposed CR to 33.102: Clarifications on integrity and ciphering of radio bearers. This CR was introduced by Ericsson and was **agreed**.

TD S3-000574: This was dealt with under agenda item 6.4 (SAGE) and **agreed** in **TD S3-000601**. It was agreed to attach this to the liaison to SAGE in **TD S3-000631**.

TD S3-000578: Proposed CR to 33.102: Re-transmission of authentication request using the same quintet (revision of S3-000406). This revision of CR104 was introduced by Siemens Atea. An objection concerning the need for T WG3 to modify their specifications was made. It was not certain that this would have implications, but T WG3 should be consulted. The CR was **agreed**, it was also agreed that this should be sent to T WG3 MCC expert (Michael Sanders) to allow the T WG3 chairman to consider the implications. A response was received from an active T WG3 member, provided in **TD S3-000624** (Gemplus). This was considered and **noted**, but it was felt that the Chairman of T WG3 would need to be contacted before presenting the CR to TSG SA Plenary for approval in order to have confidence that it will not be objected to by T WG3.

TD S3-000603 (replacement of **TD S3-000589**): Proposed CR to 33.102: Clarification on condition on rejecting keys CK and IK. This CR was **agreed**.

TD S3-000614: Problem with no USIM-ME interface in GSM-only ME. Considering discussions previously in the meeting, this topic was considered too premature for consideration at the moment and was **postponed**.

TD S3-000621: Editorial CR to 33.102. This CR was **agreed**.

TD S3-000601: Proposed CR to 33.102: Change of input parameter for the computation of the anonymity key in the re-synchronisation procedure (Revision of **TD S3-000574**). This CR was **agreed**. (The integration guidelines document should also be checked to reflect these changes).

9.2 3G TS 33.103 Integration guidelines (R99)

TD S3-000586: Proposed CR to 33.103: Correction to BEARER definition. This CR was introduced by Nokia and was **agreed** as an editorial CR (Category D).

TD S3-000612: Proposed CR to 33.103: Computation of the anonymity key for re-synchronisation. This CR was **agreed**.

9.3 3G TS 33.105 Algorithm requirements (R99)

TD S3-000587: Proposed CR to 33.105: L2 related corrections. This CR was introduced by Nokia. It was decided that this should be sent to SAGE for comment (as part of the liaison to SAGE in **TD S3-000631**) before agreeing the changes in SA WG3.

TD S3-000613: Proposed CR to 33.105: Anonymity key computation during re-synchronisation. This was **agreed** as a classification F (Correction).

9.4 3G TR 33.900 Guide to 3G security (R99)

TD S3-000571: Proposed R00 CR to 33.900: DoS attacks to 3G networks and users. This was introduced by Motorola. No formal Change Request was needed because the document was not under Change Control. It was agreed to provide this proposal to the rapporteur for 33.900 (C. Brookson) for inclusion.

9.5 3G TR 33.909 Evaluation of confidentiality / integrity algorithm (R99)

TD S3-000567: Report on the Evaluation of 3GPP Standard Confidentiality and Integrity Algorithms. 33.909 had never been created, although it had been approved as version 3.0.0 at TSG SA#6. Due to this, it was difficult to see the changes from the original version. It was agreed that this needs re-submission as a CR to 33.909, and M. Pope agreed to create a version 3.0.0 in order to facilitate this.

TD S3-000622: Proposed CR to 33.909: Addition of information on an improved theoretical result on the resilience of the f9 function. It was decided that this CR would be **postponed** until the version 3.0.0 of the document is published.

9.6 3G TS 33.102 Security architecture (R4)

TD S3-000504: R00 CR to 33.102: Re-introduction of MAP application layer security. It was noted that the report on “Principles for network domain security” was the right place to insert this text. The proposed CR was therefore **rejected**, although the content of the CR will be used for the TR.

TD S3-000556: R00 MAP Application Layer Security. Again, as agreed for TD S3-000504, the report on “Principles for network domain security” was the right place to insert this text. The proposed CR was therefore **rejected**, although the content of the CR will be used for the TR.

AP 15/4: M. Pope to obtain a number for the TS “Network Domain Security” (Release 2000) and a number for the 33.8xx-series TR “Principles for Network Domain Security”.

AP 15/5: G Koien to use the content of TD S3-000504 and TD S3-000556 for the TR “Principles for Network Domain Security”.

It was requested that the use of IKE should be carefully considered before accepting it for use in 3GPP, due to some potential problems found. It was agreed that SA WG3 were not intending to specify the use of IKE without specifying exactly how to do this in a limited domain.

9.7 3G TS 33.103 Integration guidelines (R4)

TD S3-000505: R00 CR to 33.103: Re-introduction of MAP application level security. This document was superseded by discussions on MAP Security. The CR was therefore not agreed (**rejected**), and it was agreed that this should go into the general Network Domain Security document.

9.8 3G TR 33.8de Network domain security (R4/R5)

TD S3-000557: 3G TR 33.8de V0.0.0: Network domain security (R00). This draft was provided for information. It was agreed that a table of contents would be produced for the associated TS, created at the meeting, and circulate it to the SA WG3 group for further consideration. This TR was then **noted**.

TD S3-000559: Core network security protocol architecture. This contribution was based on S3-000444, taking other considerations into account. It was noted that the CAP part of this contribution was not valid, as CAP will not be considered for the Network Domain Security work. IPSec does not currently support multiple IP addresses at a host (it was reported that the IETF were working on this matter). Care needs to be taken for setting up GTP Security. After a presentation and discussion of the document, the Principles proposed were **agreed**, and they will be included in the Principles for Network Domain Security TR.

TD S3-000560: Key management for core network security. This contribution from Siemens, was based on S3-000445, taking Siemens contribution S3-000445 into account. After a presentation and discussion of the document, the Principles proposed were **agreed**, and they will be included in the Principles for Network Domain Security TR.

TD S3-000563: The security architecture. This contribution was introduced by Ericsson. Clarification over the use of mandatory in section 2.2 was that “no mandatory use of the mechanisms” should be specified. Some other minor clarifications and comments were made and the principles will be included in the Principles for Network Domain Security TR.

TD S3-000564: Optional Element to Element IPsec. This was introduced by Motorola and proposes an optional NE to NE security using IPsec. This was covered by [TD S3-000563](#) and was therefore **noted**.

TD S3-000623: 3G TR 33.8de: Network Domain Security TR. This contribution was provided for information, and includes text from Vodafone as a result of e-mail discussions on Key Management. The document was **noted**.

TD S3-000627: Update on MAPsec IKE. This contribution was introduced by Ericsson and after some discussion it was **noted**.

9.9 3G TR 33.xxx Access security for IP based services (R4/R5)

AP 15/6: M. Pope to obtain a number for the TS “Access Security for IP based services (R4/R5)” and for the TR “Principles for Access Security for IP based services (R4/R5)”

TD S3-000553: TS 33.xxx version 0.1.0: Access security for IP-based services. (replacement of [TD S3-000513](#) version 0.0.0) This was introduced by the rapporteur for information and was **noted**.

TD S3-000561: Proposed changes and discussion of open issues for draft 3G TR “Access security for IP-based services”. This contribution suggests some modifications to, and provides some discussion of open issues in the draft TR. The contribution was presented by Siemens and the rapporteur agreed to incorporate the proposed modifications into the draft TR. The open issues were discussed, and it was decided that these should be kept in the TR in an open issues section, and contributions were requested on them.

TD S3-000625: Protection between the UE and the serving CSCF. This was introduced by Ericsson, and proposes the use of hop-by-hop encryption for the address and routing fields (To and Via) and end-to-end for the message body and some sensitive header data, however, the To and Via fields would need to be in clear from the end-to-end encryption point of view. This was discussed and it was **agreed** that this could be incorporated in the open issues section of the Network Domain Security TR.

TD S3-000576: SIP Work in Progress: Some Security Related Aspects. This presentation was presented by BT and **noted**.

TD S3-000577: IETF draft on distributed call state. This was provided by BT for information and was **noted**.

TD S3-000588: Authentication and key agreement in IM CN subsystem. This was provided by Nokia as a result of an action at the previous meeting and was based upon the discussion document TD S3-000447 from Siemens. It proposes the use of UMTS AKA also in IM CN subsystem is kept as a working assumption and further specification work is based on this assumption. It also proposes that the approaches based on use of either SSL/TLS or IPsec/IKE are seen as fall-back solutions if it turns out that the open questions with UMTS AKA cannot be solved (although these fall-back solutions would require a substantial amount of effort in evaluation, etc.). This proposal was **agreed** as a working hypothesis for SA WG3 to further develop. This will be integrated into the Network Domain Security TR and contributions were requested.

10 Future meeting dates and venues

| Meeting | Date | Location | Host |
|--|----------------------------|--------------------------|------------------|
| Ad-hoc Network Domain Security and Access Network Security | 8-9 November 2000 | Munich | Siemens |
| S3#16 | 28-30 November 2000 | Israel | Motorola |
| S3#17 | 27 February - 1 March 2001 | Sophia Antipolis, France | ETSI Secretariat |
| S3#18 | 21 or 22 – 24 May 2001 | - | Host required |
| | | | |

11 Any other business

[TD S3-000524](#): Delayed LS to SMG2 (GERAN) - S3-000379. This was an agreed LS from the previous SA WG3 meeting, which had not been sent. After consideration, it was felt that the LS was no longer needed and it was **withdrawn**.

[TD S3-000525](#): License Policy. This document was **noted**.

12 Close of meeting

The Chairman thanked the hosts for the meeting arrangements and the delegates for their hard work and co-operation. Bart Vinck, who had attended his last SA WG3 meeting, was thanked by everyone for his outstanding work and willingness in the meetings. All the best was wished him in his new career. The Chairman then closed the meeting.

Annex A: List of documents at the meeting

| Number | Title | Source | Agenda item | Document for | Replaced by Tdoc | Comments Status |
|-----------|---|-----------------------------------|-------------|--------------|------------------|---|
| S3-000500 | Draft Agenda for meeting #15 | Chairman | 2, 3 | Approval | | Approved |
| S3-000501 | Draft Report of meeting #14 version 0.0.7 | Secretary | 5, 8.1 | Approval | | Approved (version 1.0.0 includes comments) |
| S3-000502 | Response to LS (R2-001541) on Parameters to be stored in the USIM (Original LS: T3-99304) | T WG3 | 6.2 | Information | | Noted |
| S3-000503 | Liaison statement on the modified lengths of parameters AUTN and AUTS | CN WG4 | 6.2 | Information | | Noted |
| S3-000504 | R00 CR to 33.102: Re-introduction of MAP application layer security | T-Mobil | 9.6 | Approval | | Rejected |
| S3-000505 | R00 CR to 33.103: Re-introduction of MAP application level security | T-Mobil | 9.7 | Approval | | Superseded by discussions on MAP Security |
| S3-000506 | Response to LS (T3-000433) on Parameters to be stored in the USIM | RAN WG2 | 6.2 | Information | | Noted |
| S3-000507 | LS from T3: Limitation of Lifetime of Keys CK and IK | T WG3 | 6.2 | Discussion | | Proposal accepted. Response in TD594 |
| S3-000508 | LS from T3: Encrypted USIM-ME interface | T WG3 | 6.2 | Information | | Noted |
| S3-000509 | LS from T3: Support of Bookmarks / VHE User Profiles | T WG3 | 6.2 | Information | | Noted. Response in TD628, WI in TD596 |
| S3-000510 | LS from T3: Clarification of UMTS-AKA for GSM R'99 Mobiles | T WG3 | 6.2 | Discussion | | S1 to decide. Response in TD629 |
| S3-000511 | Proposed update of WI Network Domain Security | Telenor | 8.3 | Information | | agreed. Updated WI in TD606 |
| S3-000512 | Proposed updated WI for CN Signalling Security | Telenor | 8.3 | Approval | | Covered by TD511 |
| S3-000513 | TS 33.xxx version 0.0.0: Access security for IP-based services | K Boman (Ericsson) | 8, 17, 9.9 | Information | | Noted |
| S3-000514 | AHAG Meeting summary May 2000 | AHAG | 6.5 | Information | | Noted |
| S3-000515 | AHAG Meeting summary June 2000 | AHAG | 6.5 | Information | | Noted |
| S3-000516 | AHAG Meeting summary July 2000 | AHAG | 6.5 | Information | | Noted |
| S3-000517 | Liaison statement on the introduction of GEA2 (N1-001023) | CN WG1 | 6.2 | Information | | Noted |
| S3-000518 | Response to LS on Support of additional GPRS ciphering algorithms (N1-000971) | CN WG1 | 6.2 | Information | | Noted |
| S3-000519 | UE-Triggered Re-Authentication (N1-001044) | CN WG1 | 6.2 | Discussion | | Noted |
| S3-000520 | LS from CN WG1 to CN WG4: Answer to the liaison statement on the modified lengths of parameters AUTN and AUTS | Secretary | 6.2 | Information | | Noted |
| S3-000521 | Liaison statement to S3 on evaluation of the impact on positive authentication reporting on network performance | CN WG1 | 6.2 | Discussion | | Superseded by TD527 |
| S3-000522 | Rejection of non ciphered connections | France Telecom, Telia | 8.3 | Approval | | To be redrafted taking comments into account |
| S3-000523 | Liaison Statement on preventing unciphered writing/overwriting of pre-configuration fields by the HPLMN | GERAN | 6.2 | Discussion | | Response in TD630 |
| S3-000524 | Delayed LS to SMG2 (GERAN) - S3-000379 | Secretary | 6.4 | Decision | | LS withdrawn |
| S3-000525 | License Policy | Secretary (originally Mitsubishi) | 11 | Information | | Input to make available on the ftp server. Noted |
| S3-000526 | LS from T WG2: RE: Applications on external devices | T WG2 | 6.2 | Information | | Noted |
| S3-000527 | Liaison statement on Positive Authentication Reporting | CN WG4 | 6.2 | Discussion | | Response in TD605 |
| S3-000528 | Withdrawn | Vodafone | 9.1 | Approval | | Withdrawn |
| S3-000529 | Withdrawn | Vodafone | 9.1 | Approval | | Withdrawn |

| Number | Title | Source | Agenda item | Document for | Replaced by Tdoc | Comments Status |
|-----------|--|--------------------|-------------|-----------------------|------------------|--|
| S3-000530 | Withdrawn | Vodafone | 9.1 | Approval | | Withdrawn |
| S3-000531 | Withdrawn | Vodafone | 9.1 | Approval | | Withdrawn |
| S3-000532 | Withdrawn | Vodafone | 9.1 | Approval | | Withdrawn |
| S3-000533 | Withdrawn | Vodafone | 9.1 | Approval | | Withdrawn |
| S3-000534 | Withdrawn | Vodafone | 9.1 | Approval | | Withdrawn |
| S3-000535 | Proposed CR to 33.102: Clarifications on the START parameter handling | Ericsson | 9.1 | Approval | S3-000615 | Updated in TD615 |
| S3-000536 | Proposed CR to 33.102: Start of ciphering | Ericsson | 9.1 | Approval | | Approved |
| S3-000537 | Proposed CR to 33.102: Removal of ME triggered authentication during RRC connection | Ericsson | 9.1 | Approval | | Approved |
| S3-000538 | Proposed CR to 33.102: New FRESH at SRNC relocation | Ericsson | 9.1 | Approval | S3-000616 | Updated in TD616 |
| S3-000539 | Proposed CR to 33.102: START value handling for MS with a GSM SIM inserted | Ericsson | 9.1 | Approval | | Rejected |
| S3-000540 | Proposed CR to 33.102: Removal of EUIC | Ericsson | 9.1 | Approval | | Approved |
| S3-000541 | Report of the 3GPP TSG SA WG3-LI (formerly SMG10-WPD) meeting #3/00 on lawful interception | SA WG3-LI Chairman | 6.3 | | | Noted |
| S3-000542 | DRAFT Report of the 3GPP TSG SA WG3-LI (S3-LI) meeting #4/00 on lawful interception | SA WG3-LI Chairman | 6.3 | Information | | Noted |
| S3-000543 | 3G TS 33.106 V3.1.0 - Release2000 draft rev | SA WG3-LI Chairman | 6.3, 9.5 | | | Noted |
| S3-000544 | Proposed CR to 33.102: START value handling for ME | Qualcomm | 9.1 | Approval | | Withdrawn |
| S3-000545 | Proposed CR to 33.102: Removal of duplicate text on USIM toolkit secure messaging and addition of a reference to 02.48 and 03.48 instead | Vodafone | 9.1 | Approval | | Approved |
| S3-000546 | Proposed CR to 33.102: Addition of authentication parameter lengths | Vodafone | 9.1 | Approval | | Approved |
| S3-000547 | Proposed CR to 33.102: Removal of secure authentication mechanism negotiation | Vodafone | 9.1 | Approval | | Approved as Cat D |
| S3-000548 | Proposed CR to 33.102: Removal of HE control of some aspects of security configuration | Vodafone | 9.1 | Approval | | Approved as Cat D |
| S3-000549 | Proposed CR to 33.102: Removal of MS triggered re-authentication during connections | Vodafone | 9.1 | Approval | | Withdrawn |
| S3-000550 | Proposed CR to 33.102: Specification of authentication vector handling in serving network nodes | Vodafone | 9.1 | Approval | | Approved as Cat D |
| S3-000551 | Proposed CR to 33.102: Refinement of requirements on sequence number checking on the USIM | Vodafone | 9.1 | Approval | | Withdrawn |
| S3-000552 | Proposed editorial CR to 33.102: References | Siemens Atea | 9.1 | Approval | | Approved |
| S3-000553 | Draft 33.xxx: Access security for IP-based services version 0.1.0 | Ericsson | 9.9 | Information | | Noted |
| S3-000554 | 3GPP Project plan for Wis with SA WG3 impact | Secretary | 8.2 | Update | | Update to be finalised and attached to meeting report |
| S3-000555 | LS from T WG2 - Re: Clarification on UMTS AKA for SIM (GSM R99 Mobiles?) | T WG2 | 6.2 | Discussion | | (T2 to ask SA to confirm assumptions) SA WG3 to follow SA WG1 requirements |
| S3-000556 | R00 MAP Application Layer Security | Ericsson | 9.6 | Discussion / Decision | | Includes potential CR. CR rejected |
| S3-000557 | 3G TR 33.8de V0.0.0: Network domain security (R00) | Telenor | 9.8 | Information | | Noted |
| S3-000558 | Proposed TR-45 AHAG/S3 Joint Meeting Agenda | AHAG Chairman | 7 | Approval | | Approved at joint meeting |

| Number | Title | Source | Agenda item | Document for | Replaced by Tdoc | Comments Status |
|-----------|--|--|-------------|-----------------------|------------------|--|
| S3-000559 | Core network security protocol architecture | Siemens AG | 9.8 | Discussion / Decision | | Agreed. To be included in NW Dom Sec TR |
| S3-000560 | Key management for core network security | Siemens AG | 9.8 | Discussion / Decision | | Agreed. To be included in NW Dom Sec TR |
| S3-000561 | Proposed changes and discussion of open issues for draft 3G TR "Access security for IP-based services" | Siemens AG | 9.9 | Discussion / Decision | | Open issues to be included in NW Dom Sec TR |
| S3-000562 | AKA and the Rogue Mobile Problem | Motorola | 7 | Discussion | | |
| S3-000563 | The security architecture | Ericsson | 9.8 | Discussion | | Agreed. To be included in NW Dom Sec TR |
| S3-000564 | Optional Element to Element IPsec | Motorola | 9.8 | Decision | | Noted (covered by TD563) |
| S3-000565 | Home Control of AKA Issues | AHAG | 7 | Discussion | | |
| S3-000566 | TR-45 AHAG/TR-45.2 Recommendations for Joint AKA Control | AHAG | 7 | Discussion | | |
| S3-000567 | Report on the Evaluation of 3GPP Standard Confidentiality and Integrity Algorithms | ETSI SAGE Task Force | 6.4 | Information | | Noted. Change marked CR needed. M Pope to produce version 3.0.0 of TR33.909 |
| S3-000568 | Proposed CR to 33.102: Profiles for sequence number management | Siemens | 9.1 | Approval | | Approved as Category C. Need to ensure the Category is explained to TSG SA |
| S3-000569 | Proposed CR to 3.102: Change of parameter value x regarding the capability of the USIM to store information on past successful authentication events | Siemens | 9.1 | Approval | | Approved |
| S3-000570 | WI proposal on UMTS network vulnerabilities to DoS attacks | Motorola | 8.4 | Discussion | S3-000611 | Updated in TD611 |
| S3-000571 | Proposed R00 CR to 33.900: DoS attacks to 3G networks and users | Motorola | 9.4 | Approval | | To be included in 33.900 (not yet under change control) |
| S3-000572 | Proposed CR to 33.102: Clarifications on the COUNT parameters | Ericsson | 9.1 | Approval | S3-000620 | Updated in TD620 |
| S3-000573 | Proposed CR to 33.102: Clarifications on integrity and ciphering of radio bearers | Ericsson | 9.1 | Approval | | Approved |
| S3-000574 | Proposed CR to 33.102: Change of input parameter for the computation of the anonymity key in the re-synchronisation procedure | Siemens | 9.1 | Approval | S3-000601 | Updated in TD601 |
| S3-000575 | LS from WAP/TSG-T3 WAP SAT interoperation Ad Hoc: GSM 03.48 | WAP/TSG-T3 WAP SAT interoperation Ad Hoc | 6.2 | Discussion | S3-000583 | Note: Approved version in S3-000583 |
| S3-000576 | SIP Work in Progress: Some Security Related Aspects | BT | 9.9 | Presentati on | | Noted |
| S3-000577 | IETF draft on distributed call state | BT | 9.9 | Information | | Noted |
| S3-000578 | Proposed CR to 33.102: Re-transmission of authentication request using the same quintet (revision of S3-000406) | Siemens Atea | 9.1 | Approval | | Approved. T WG3 Chairman needs to be contacted before presentation to TSG SA |
| S3-000579 | WI description for supporting USIM toolkit security enhancements in T3 | Vodafone | 8.3 | Approval | S3-000599 | Updated in TD599 |
| S3-000580 | WI description for P-TMSI signature stage 2 specification | Vodafone | 8.3 | Approval | | Need for the WI needs investigation |
| S3-000581 | LS from ITU-T on IMT2000 SECURITY MANAGEMENT (=S3-000437) | ITU-T | 6.2 | Discussion | | Response in TD600 |

| Number | Title | Source | Agenda item | Document for | Replaced by Tdoc | Comments Status |
|-----------|---|---|-------------|-----------------------|------------------|--|
| S3-000582 | LS from SA WG4 (cc SA WG3): Response LS to TSG-SA on Call Control Applications in External Devices | SA WG4 | 6.2 | Information | | Noted |
| S3-000583 | LS from WAP/TSG-T3 WAP SAT interoperation Ad Hoc: Security model in GSM 03.48 / TS 23.048 | LS from WAP/TSG-T3 WAP SAT interoperation Ad Hoc: | 6.2 | Discussion | | Response in TD599 |
| S3-000584 | Support of UMTS AKA for GSM only R99 mobiles | Ericsson | 6.2 | Discussion | | Dealt with in AHAG joint session. SA WG3 follow requirements of SA WG1 |
| S3-000585 | WI description for LCS security | Nokia | 8.3 | Approval | S3-000609 | Updated in TD609 |
| S3-000586 | Proposed CR to 33.103: Correction to BEARER definition | Nokia | 9.2 | Approval | | Approved as Cat D |
| S3-000587 | Proposed CR to 33.105: L2 related corrections | Nokia | 9.3 | Approval | | Sent to SAGE for comment (attached to TD631) |
| S3-000588 | Authentication and key agreement in IM CN subsystem | Nokia | 9.9 | Discussion / Decision | | Agreed as a working hypothesis. To be included in NW Dom Sec TR |
| S3-000589 | CR to 33.102: Clarification on condition on rejecting keys CK and IK (resubmitted TD424) | T-Mobil | 9.1 | | S3-000603 | Updated in TD603 |
| S3-000590 | 3GPP AKA Specifications Subject to Joint TR-45/3GPP Control | AHAG | 7 | Discussion | | |
| S3-000591 | TR-45 AHAG/TR-45.2 Recommendations for Joint AKA Control | AHAG | 7 | | | |
| S3-000592 | Draft text of "report of AKA success" contribution | | 7 | Discussion | | |
| S3-000593 | LS to GERAN: Modification of pre-configuration information | SA WG3 | 6.2 | Approval | S3-000630 | Updated in TD630 |
| S3-000594 | Re: Limitation of Lifetime of Keys CK and IK (reply to TD 507) | | 6.2 | Approval | | Approved |
| S3-000595 | LS to T3: VHE User Profiles - Security issues (response to TD509) | | 8.4 | Approval | S3-000628 | Updated in TD628 |
| S3-000596 | WI description for VHE Security (produced from TD509 discussion) | | | Approval | S3-000610 | Updated in TD610 |
| S3-000597 | Draft LS about USIM support in GSM only terminals | SA WG3 | 6.2 | Approval | S3-000629 | Updated in TD629 |
| S3-000598 | CR to 33.102: Optional support for USIM-ME interface for GSM-only R99 ME | | 9.1 | Approval | | Rejected |
| S3-000599 | WI description for supporting USIM toolkit security enhancements in T3 | SA WG3 | 8.3 | Approval | | Approved |
| S3-000600 | Reply LS to ITU: Use of the Fraud Information Gathering System (FIGs) (response to TD581) | SA WG3 | 6.2 | Approval | | Approved |
| S3-000601 | Proposed CR to 33.102: Change of input parameter for the computation of the anonymity key in the re-synchronisation procedure (rev of TD 574) | Siemens | 9.1 | Approval | | Approved (Attached to TD631 to SAGE) |
| S3-000602 | Draft LS to SAGE about 3G algorithms | SA WG3 | 6.2 | Approval | S3-000631 | Updated in TD631 |
| S3-000603 | Proposed CR to 33.102: Clarification on condition on rejecting keys CK and IK (revision of TD 589) | T-Mobil | 9.1 | Approval | | Approved |
| S3-000604 | LS on SA WG3 agreements after Joint AHAG meeting | | 7 | Approval | S3-000633 | Updated in TD633 |
| S3-000605 | Response LS to CN4 on Pos authentication reporting (P Howard) | | 6.2 | Approval | | Approved |
| S3-000606 | WI sheet: Network Domain Security | | 8.3 | | | Approved |
| S3-000607 | LS to CN WG4: Protection of GTP Messages using IPSec | SA WG3 | 8.3 | Approval | S3-000632 | Updated in TD632 |
| S3-000608 | Report on need of P-TMSI from Joint SA WG3/CN meeting | | | Information | | Noted |

| Number | Title | Source | Agenda item | Document for | Replaced by Tdoc | Comments Status |
|-----------|---|-----------------------|-------------|-----------------------|------------------|---|
| S3-000609 | Updated WI description for LCS security (revision of TD 585) | Nokia | 8.4 | Approval | | Approved |
| S3-000610 | WI description for VHE Security (revision of TD596) | | | Approval | | Approved |
| S3-000611 | WI proposal on UMTS network vulnerabilities to DoS attacks (revision of TD570) | Motorola | 8.4 | Approval | | Approved |
| S3-000612 | Proposed CR to 33.103: Computation of the anonymity key for re-synchronisation | Siemens Atea | 9.2 | Approval | | Approved |
| S3-000613 | Proposed CR to 33.105: Anonymity key computation during re-synchronisation | Siemens Atea | 9.3 | Approval | | Approved as Cat F (Attached to TD631 to SAGE) |
| S3-000614 | Problem with no USIM-ME interface in GSM-only ME | Siemens Atea | 9.1 | Discussion / Decision | | Postponed |
| S3-000615 | Revised CR to 33.102: Clarifications on the START parameter handling (Rev of 535) | SA WG3 | 9.1 | Approval | | Approved |
| S3-000616 | Proposed CR to 33.102: New FRESH at SRNC relocation (Revised TD538) | SA WG3 | 9.1 | Approval | | Approved |
| S3-000617 | Proposed CR to 33.102: Addition of authentication parameter lengths (revised TD546) | SA WG3 | 9.1 | Approval | | Approved |
| S3-000618 | Principles for the revision of Annex C | Siemens AG | 9.1 | Discussion / Decision | | Noted |
| S3-000619 | Report of GSM 2000 Security Meeting No. 9 | C Brookson (GSM 2000) | 6.5 | Information | | Noted |
| S3-000620 | Proposed CR to 33.102: Clarifications on the COUNT parameters (revised TD572) | Ericsson | 9.1 | Approval | | Approved |
| S3-000621 | Editorial CR to 33.102: Minor editorial changes | Vodafone | 9.1 | Approval | | Approved |
| S3-000622 | Proposed CR to 33.909: Addition of information on an improved theoretical result on the resilience of the f9 function | Vodafone | 9.5 | Approval | | Postponed until version 3.0.0 has been published. |
| S3-000623 | 3G TR 33.8de: Network Domain Security TR | Vodafone | 9.8 | Information | | Noted |
| S3-000624 | Comments on CR to 33.102: "Re-transmission of authentication request using the same quintet" in S3-000578 | Gemplus | 9.1 | Discussion | | Related to S3-000578. Noted. |
| S3-000625 | Protection between the UE and the serving CSCF | Ericsson | 9.9 | Discussion | | To be added to open issues of NW Dom Sec TR |
| S3-000626 | Work Item Description: Access security for IP-based services | Ericsson | 9.9 | Approval | | Approved |
| S3-000627 | Update on MAPSec IKE | Ericsson | 9.8 | Discussion | | Noted |
| S3-000628 | LS to T3: VHE User Profiles - Security issues (response to TD509) | | 8.4 | Approval | | Approved |
| S3-000629 | Draft LS to T WG3 about USIM support in GSM only terminals | SA WG3 | 6.4 | | | Approved |
| S3-000630 | LS to GERAN: Modification of pre-configuration information | SA WG3 | 6.4 | Approved | | Approved |
| S3-000631 | LS to SAGE about 3G algorithms | SA WG3 | 6.4 | Approval | | Approved TDs 587, 601 and 613 attached |
| S3-000632 | LS to CN WG4: Protection of GTP Messages using IPSec | SA WG3 | 6.4 | Approval | | Approved |
| S3-000633 | Liaison statement to Tr-45/AHAG: the status of the current S3/TR45AHAG action items (Rev of TD604) | SA WG3 | | 7 Approval | | Approved |

Annex B: List of attendees

To be completed. **DATA NEEDED !**

| Name | | Company | e-mail | 3GPP Member | |
|------|--|---------|--------|-------------|--|
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Annex C: Status of specifications under SA WG3 responsibility

Note: This table provides the status following the TSG SA#09 meeting, including updated versions where CRs were approved. This table also contains the GSM specifications transferred to 3GPP and the anticipated Release 4 specifications in the range 4x.yyy and 5x.yyy which do not yet exist.

| Specification | | | Title | Editor | Rel | Comment |
|---------------|--------|-------|--|------------------------|---------|---|
| TS | 01.31 | 7.0.1 | Fraud Information Gathering System (FIGS); Service requirements - Stage 0 | WRIGHT, Tim | R1998 | #23: 5.0.0 #25: 7.0.0 (5.x.y withdrawn) #26: 7.0.1 |
| TS | 01.31 | 8.0.0 | Fraud Information Gathering System (FIGS); Service requirements - Stage 0 | WRIGHT, Tim | R1999 | |
| TS | 01.33 | 7.0.0 | Lawful Interception requirements for GSM | MILES, David F. | R1998 | #25: 7.0.0 (renumbered from 10.20) |
| TS | 01.33 | 8.0.0 | Lawful Interception requirements for GSM | MILES, David F. | R1999 | |
| TS | 01.61 | 8.0.0 | General Packet Radio Service (GPRS); GPRS ciphering algorithm requirements | VANNESTE, Geneviève | R1999 | |
| TS | 02.09 | 3.1.0 | Security Aspects | GILBERT, Henri | Ph1 | #6b: 3.1.0 |
| TS | 02.09 | 4.5.0 | Security Aspects | GILBERT, Henri | Ph2 | #7: 4.2.1 #12: 4.3.0 #22: 4.4.0 edito:4.4.1 #31:4.5.0 |
| TS | 02.09 | 5.2.0 | Security Aspects | GILBERT, Henri | R1996 | #20: 5.0.0 #22: 5.1.0 edito 5.1.1 #31:5.2.0 |
| TS | 02.09 | 6.1.0 | Security Aspects | GILBERT, Henri | R1997 | #27: 6.0.0 edito:6.0.1 #31:6.1.0 |
| TS | 02.09 | 7.1.0 | Security Aspects | GILBERT, Henri | R1998 | #29: 7.0.0 #31:7.1.0 |
| TS | 02.09 | 8.0.0 | Security Aspects | GILBERT, Henri | R1999 | |
| TS | 02.31 | 7.1.1 | Fraud Information Gathering System (FIGS) Service description - Stage 1 | WRIGHT, Tim | R1998 | #23: 5.0.0 #25: 7.0.0 #26: 7.1.0 (5.0.0 withdrawn) |
| TS | 02.31 | 8.0.0 | Fraud Information Gathering System (FIGS) Service description - Stage 1 | WRIGHT, Tim | R1999 | |
| TS | 02.32 | 7.1.1 | Immediate Service Termination (IST); Service description - Stage 1 | WRIGHT, Tim | R1998 | #25: 7.0.0 #26: 7.1.0 |
| TS | 02.32 | 8.0.0 | Immediate Service Termination (IST); Service description - Stage 1 | WRIGHT, Tim | R1999 | |
| TS | 02.33 | 7.3.0 | Lawful Interception - Stage 1 | MCKIBBEN, Bernie | R1998 | #20: 5.0.0 #25: 7.0.0 (5.0.0 withdrawn) #27: 7.1.0 #28: 7.2.0 #29: 7.3.0 |
| TS | 02.33 | 8.0.0 | Lawful Interception - Stage 1 | MCKIBBEN, Bernie | R1999 | |
| TS | 03.20 | 3.0.0 | Security-related Network Functions | GILBERT, Henri | Ph1-EXT | #7: 3.0.0 |
| TS | 03.20 | 3.3.2 | Security-related Network Functions | GILBERT, Henri | Ph1 | |
| TS | 03.20 | 4.4.1 | Security-related Network Functions | GILBERT, Henri | Ph2 | #7: 4.2.1 #10: 4.3.0 #17: .3.2 #21: 4.4.0 |
| TS | 03.20 | 5.2.1 | Security-related Network Functions | GILBERT, Henri | R1996 | #20: 5.0.0 #21: 5.1.0 #23: 5.2.0 SMG#29: CRs but postponed, then forgotten! |
| TS | 03.20 | 6.1.0 | Security-related Network Functions | GILBERT, Henri | R1997 | #25: 6.0.0 SMG#29: 6.1.0 #32:6.2.0 |
| TS | 03.20 | 7.3.0 | Security-related Network Functions | GILBERT, Henri | R1998 | #28: 7.0.0 SMG#29: 7.1.0 #30: 7.2.0 #32:7.3.0 |
| TS | 03.20 | 8.1.0 | Security-related Network Functions | GILBERT, Henri | R1999 | #32:8.1.0 |
| TS | 03.31 | 7.0.0 | Fraud Information Gathering System (FIGS); Service description; Stage 2 | WRIGHT, Tim | R1998 | #26: 7.0.0 |
| TS | 03.31 | 8.0.0 | Fraud Information Gathering System (FIGS); Service description; Stage 2 | WRIGHT, Tim | R1999 | |
| TS | 03.33 | 7.1.0 | Lawful Interception - stage 2 | MILES, David F. | R1998 | #27: for info #28: 7.0.0 #29: 7.1.0 |
| TS | 03.33 | 8.0.0 | Lawful Interception - stage 2 | MILES, David F. | R1999 | |
| TS | 03.35 | 7.0.0 | Immediate Service Termination (IST); Stage 2 | WRIGHT, Tim | R1998 | #27: 7.0.0 |
| TS | 03.35 | 8.0.0 | Immediate Service Termination (IST); Stage 2 | WRIGHT, Tim | R1999 | |
| TS | 10.20 | 0.0.0 | Lawful Interception requirements for GSM | MCKIBBEN, Bernie | R1999 | |
| TS | 21.133 | 3.1.0 | Security Threats and Requirements | CHRISTOFFERSSON, Per | R1999 | |
| TS | 22.022 | 3.2.0 | Personalisation of GSM ME Mobile functionality specification - Stage 1 | NGUYEN NGOC, Sebastien | R1999 | Transfer>TSG#4,CR at TSG#5 |
| TS | 33.102 | 3.6.0 | Security Architecture | VINCK, Bart | R1999 | TSG#7: 3.4.0 TSG#8:3.5.0 TSG#9:3.6.0 |
| TS | 33.103 | 3.4.0 | Security Integration Guidelines | BLANCHARD, Colin | R1999 | TSG#7: 3.2.0 TSG#8:3.3.0 TSG#9:3.4.0 |

| | | | | | | |
|----|--------|-------|---|--------------------|-------|---|
| TS | 33.105 | 3.5.0 | Cryptographic Algorithm requirements | CHIKAZAWA, Takeshi | R1999 | TSG#7: 3.3.0 TSG#8:3.4.0 TSG#9:3.5.0 |
| TS | 33.106 | 3.1.0 | Lawful interception requirements | WILHELM, Berthold | R1999 | . |
| TS | 33.107 | 3.0.0 | Lawful interception architecture and functions | WILHELM, Berthold | R1999 | New at TSG#6 approved |
| TS | 33.120 | 3.0.0 | Security Objectives and Principles | WRIGHT, Tim | R1999 | . |
| TR | 33.900 | 1.2.0 | Guide to 3G security | BROOKSON, Charles | R1999 | New at TSG#6 |
| TR | 33.901 | 3.0.0 | Criteria for cryptographic Algorithm design process | BLOM, Rolf | R1999 | . |
| TR | 33.902 | 3.1.0 | Formal Analysis of the 3G Authentication Protocol | HORN, Guenther | R1999 | |
| TR | 33.908 | 3.0.0 | Security Algorithms Group of Experts (SAGE); General report on the design, specification and evaluation of 3GPP standard confidentiality and integrity algorithms | WALKER, Michael | R1999 | TSG#7: S3-000105=NP-000049 TSG#7 SP-000039 |
| TR | 33.909 | 3.0.0 | ETSI SAGE 3GPP Standards Algorithms Task Force: Report on the evaluation of 3GPP standard confidentiality and integrity algorithms | WALKER, Michael | R1999 | TSG#7: Is a reference in 33.908 |
| TS | 35.201 | 3.1.0 | Specification of the 3GPP confidentiality and integrity algorithms; Document 1: f8 and f9 specifications | WALKER, Michael | R1999 | ex SAGE - not publicly available; supplied by ETSI under licence TSG#7: 3.1.0 ex SAGE 3.1.0 |
| TS | 35.202 | 3.1.0 | Specification of the 3GPP confidentiality and integrity algorithms; Document 2: Kasumi algorithm specification | WALKER, Michael | R1999 | ex SAGE - not publicly available; supplied by ETSI under licence TSG#7: 3.1.0 ex SAGE 3.1.0 |
| TS | 35.203 | 3.1.0 | Specification of the 3GPP confidentiality and integrity algorithms; Document 3: Implementors' test data | WALKER, Michael | R1999 | ex SAGE - not publicly available; supplied by ETSI under licence TSG#7: 3.1.0 ex SAGE 3.1.0 |
| TS | 35.204 | 3.1.0 | Specification of the 3GPP confidentiality and integrity algorithms; Document 4: Design conformance test data | WALKER, Michael | R1999 | ex SAGE - not publicly available; supplied by ETSI under licence TSG#7: 3.1.0 ex SAGE 3.1.0 |
| TS | 41.031 | 0.0.0 | Fraud Information Gathering System (FIGS); Service requirements - Stage 0 | WRIGHT, Tim | Rel-4 | |
| TS | 41.033 | 0.0.0 | Lawful Interception requirements for GSM | MILES, David F. | Rel-4 | |
| TS | 41.061 | 0.0.0 | General Packet Radio Service (GPRS); GPRS ciphering algorithm requirements | .., | Rel-4 | |
| TS | 42.009 | 0.0.0 | Security Aspects | GILBERT, Henri | Rel-4 | |
| TS | 42.031 | 0.0.0 | Fraud Information Gathering System (FIGS) Service description - Stage 1 | WRIGHT, Tim | Rel-4 | |
| TS | 42.032 | 0.0.0 | Immediate Service Termination (IST); Service description - Stage 1 | WRIGHT, Tim | Rel-4 | |
| TS | 42.033 | 0.0.0 | Lawful Interception - Stage 1 | MILES, David F. | Rel-4 | |
| TS | 43.020 | 0.0.0 | Security-related Network Functions | GILBERT, Henri | Rel-4 | #32:8.1.0 |
| TS | 43.031 | 0.0.0 | Fraud Information Gathering System (FIGS); Service description; Stage 2 | WRIGHT, Tim | Rel-4 | |
| TS | 43.033 | 0.0.0 | Lawful Interception - stage 2 | MILES, David F. | Rel-4 | |
| TS | 43.035 | 0.0.0 | Immediate Service Termination (IST); Stage 2 | WRIGHT, Tim | Rel-4 | |
| TS | 50.020 | 0.0.0 | Lawful Interception requirements for GSM | .., | Rel-4 | |

Annex D: List of CRs to specifications under SA WG3 responsibility

Note: The CRs agreed in this meeting as Classification “D” (Editorial changes) were presented to TSG SA #09 as Classification “F” (Corrections) as detailed in the table below.

| Spec | CR | Rev | Phase | Subject | Cat | Cur Vers | WG meeting | WG TD | WG status | Remarks |
|--------|-----|-----|-------|--|-----|----------|------------|-----------|-----------|---|
| 33.102 | 104 | 1 | R00 | Re-transmission of authentication request using the same quintet | F | 3.5.0 | S3-15 | S3-000578 | agreed | Revised TD S3-000406 agreed in meeting #15 |
| 33.102 | 111 | | R99 | Start of ciphering | F | 3.5.0 | S3-15 | S3-000536 | agreed | |
| 33.102 | 112 | | R00 | Removal of ME triggered authentication during RRC connection | F | 3.5.0 | S3-15 | S3-000537 | agreed | |
| 33.102 | 113 | | R99 | Removal of EUIC | F | 3.5.0 | S3-15 | S3-000540 | agreed | Removal is editorial as EUIC is not R99 (SP-06 decision) |
| 33.102 | 114 | | R99 | Removal of duplicate text on USIM toolkit secure messaging and addition of a reference to 02.48 and 03.48 instead. | F | 3.5.0 | S3-15 | S3-000545 | agreed | |
| 33.102 | 115 | | R99 | Removal of secure authentication mechanism negotiation. | F | 3.5.0 | S3-15 | S3-000547 | agreed | |
| 33.102 | 116 | | R99 | Removal of HE control of some aspects of security configuration | F | 3.5.0 | S3-15 | S3-000548 | agreed | |
| 33.102 | 117 | | R99 | Specification of authentication vector handling in serving network nodes. | F | 3.5.0 | S3-15 | S3-000550 | agreed | |
| 33.102 | 118 | | R99 | Update of References | F | 3.5.0 | S3-15 | S3-000552 | agreed | |
| 33.102 | 119 | | R99 | Profiles for sequence number management | C | 3.5.0 | S3-15 | S3-000568 | agreed | Although a Cat C in R99, the Annex is informative, and the examples given will help operators in choosing a Seq. Num Scheme |
| 33.102 | 120 | | R99 | Change of parameter value x regarding the capability of the USIM to store information on past successful authentication events | F | 3.5.0 | S3-15 | S3-000569 | agreed | |
| 33.102 | 121 | | R99 | Clarifications on integrity and ciphering of radio bearers. | F | 3.5.0 | S3-15 | S3-000573 | agreed | |
| 33.102 | 122 | | R99 | Change of computation of the anonymity key in the re-synchronisation procedure | F | 3.5.0 | S3-15 | S3-000601 | agreed | |
| 33.102 | 123 | | R99 | Clarification on condition on rejecting keys CK and IK | F | 3.5.0 | S3-15 | S3-000603 | agreed | |
| 33.102 | 124 | | R99 | Clarifications on the START parameter handling | F | 3.5.0 | S3-15 | S3-000615 | agreed | |
| 33.102 | 125 | | R99 | New FRESH at SRNC relocation | F | 3.5.0 | S3-15 | S3-000616 | agreed | |
| 33.102 | 126 | | R99 | Addition of authentication parameter lengths | F | 3.5.0 | S3-15 | S3-000617 | agreed | |
| 33.102 | 127 | | R99 | Clarifications on the COUNT parameters | F | 3.5.0 | S3-15 | S3-000620 | agreed | |
| 33.102 | 128 | | R99 | Minor editorial changes | F | 3.5.0 | S3-15 | S3-000621 | agreed | |

Annex E: List of Liaisons**E.1 Liaisons to the meeting**

| TD Number | Title | Source | Comment |
|-----------|---|---|--|
| S3-000502 | Response to LS (R2-001541) on Parameters to be stored in the USIM (Original LS: T3-99304) | T WG3 | Noted |
| S3-000503 | Liaison statement on the modified lengths of parameters AUTN and AUTS | CN WG4 | Noted |
| S3-000506 | Response to LS (T3-000433) on Parameters to be stored in the USIM | RAN WG2 | Noted |
| S3-000507 | LS from T3: Limitation of Lifetime of Keys CK and IK | T WG3 | Proposal accepted. Response in TD594 |
| S3-000508 | LS from T3: Encrypted USIM-ME interface | T WG3 | Noted |
| S3-000509 | LS from T3: Support of Bookmarks / VHE User Profiles | T WG3 | Noted. Response in TD628, WI in TD596 |
| S3-000510 | LS from T3: Clarification of UMTS-AKA for GSM R'99 Mobiles | T WG3 | S1 to decide. Response in TD629 |
| S3-000517 | Liaison statement on the introduction of GEA2 (N1-001023) | CN WG1 | Noted |
| S3-000518 | Response to LS on Support of additional GPRS ciphering algorithms (N1-000971) | CN WG1 | Noted |
| S3-000519 | UE-Triggered Re-Authentication (N1-001044) | CN WG1 | Noted |
| S3-000520 | LS from CN WG1 to CN WG4: Answer to the liaison statement on the modified lengths of parameters AUTN and AUTS | Secretary | Noted |
| S3-000521 | Liaison statement to S3 on evaluation of the impact on positive authentication reporting on network performance | CN WG1 | Superseded by TD527 |
| S3-000523 | Liaison Statement on preventing unciphered writing/overwriting of pre-configuration fields by the HPLMN | GERAN | Response in TD630 |
| S3-000524 | Delayed LS to SMG2 (GERAN) - S3-000379 | Secretary | LS withdrawn |
| S3-000526 | LS from T WG2: RE: Applications on external devices | T WG2 | Noted |
| S3-000527 | Liaison statement on Positive Authentication Reporting | CN WG4 | Response in TD605 |
| S3-000555 | LS from T WG2 - Re: Clarification on UMTS AKA for SIM (GSM R99 Mobiles?) | T WG2 | (T2 to ask SA to confirm assumptions) SA WG3 to follow SA WG1 requirements |
| S3-000581 | LS from ITU-T on IMT2000 SECURITY MANAGEMENT (=S3-000437) | ITU-T | Response in TD600 |
| S3-000582 | LS from SA WG4 (cc SA WG3): Response LS to TSG-SA on Call Control Applications in External Devices | SA WG4 | Noted |
| S3-000583 | LS from WAP/TSG-T3 WAP SAT interoperation Ad Hoc: Security model in GSM 03.48 / TS 23.048 | LS from WAP/TSG-T3 WAP SAT interoperation Ad Hoc: | Response in TD599 |

E.2 Liaisons from the meeting

| TD Number | Title | Status | Comment |
|-----------|--|----------|--|
| S3-000594 | Re: Limitation of Lifetime of Keys CK and IK (reply to TD 507) | Approval | Approved |
| S3-000600 | Reply LS to ITU: Use of the Fraud Information Gathering System (FIGs) (response to TD581) | Approval | Approved |
| S3-000605 | Response LS to CN4 on Pos authentication reporting (P Howard) | Approval | Approved |
| S3-000628 | LS to T3: VHE User Profiles - Security issues (response to TD509) | Approval | Approved |
| S3-000629 | Draft LS to T WG3 about USIM support in GSM only terminals | | Approved |
| S3-000630 | LS to GERAN: Modification of pre-configuration information | Approved | Approved |
| S3-000631 | LS to SAGE about 3G algorithms | Approval | Approved TDs 587, 601 and 613 attached |
| S3-000632 | LS to CN WG4: Protection of GTP Messages using IPSec | Approval | Approved |
| S3-000633 | Liaison statement to Tr-45/AHAG: the status of the current S3/TR45AHAG action items (Rev of TD604) | Approval | Approved |

Annex F: List of Actions from the meeting

- ACTION #15/1:** C. Brookson to ask the GSMA whether they would contribute their document on RAND generation to SA WG3.
- AP 15/2:** M Pope to attach updated project plan to the meeting report.
- AP 15/3:** M Marcovici to send this to AHAG for information.
- AP 15/4:** M. Pope to obtain a number for the TS “Network Domain Security” (Release 2000) and a number for the 33.8xx-series TR “Principles for Network Domain Security”.
- AP 15/5:** G Koien to use the content of TD S3-000504 and TD S3-000556 for the TR “Principles for Network Domain Security”.
- AP 15/6:** M. Pope to obtain a number for the TS “Access Security for IP based services (R4/R5)” and for the TR "Principles for Access Security for IP based services (R4/R5)".

Annex G: Updated 3GPP Workplan

PDF version Attached

| ID | Unique ID | Name | Release | Split | Resource | Qtr 2, 2000 | | | Qtr 3, 2000 | | | Qtr 4, 2000 | | | Qtr 1, 2001 | | | Qtr 2, 2001 | | | Qtr 3, 2001 | | | Qtr 4, 2001 | | |
|----|-----------|---|---------|-------|----------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|
| | | | | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| 1 | 2044 | VERSION Nov. 6th | | No | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 1462 | "CTRL + a" to display all the 3GPP fiel | | No | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 1463 | If MS Project crashes, hide the "hyperl | | No | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 2058 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 96 | | | No | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 2 | Evolutions of the transport in the UTR/ | NA | Yes | TSG RAN | | | | | | | | | | | | | | | | | | | | | |
| 7 | 625 | IP transport in the UTRAN | Rel4 | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | |
| 8 | 624 | Radio access bearer support enhancerr | Rel5 | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | |
| 9 | 12 | QoS optimisation for AAL2 connections | Rel4 | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | |
| 10 | 1995 | Migration to modification procedures | Rel4 | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | |
| 11 | 1834 | Conformance Test Aspects | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 12 | 1835 | UE Conformance test spec. changes, R4 evolu | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 13 | 1836 | UE Conformance test spec. changes, R4 evolut | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 14 | 1837 | Logical Test Interface, Specification, R4 evoluti | | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | |
| 15 | 4 | Evolutions of the transport in the CN | NA | Yes | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 16 | 859 | IP Transport of CN protocols (e.g., CAP, | Rel5 | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 17 | 1678 | Stage 2 | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 18 | 1679 | Stage 3 | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 19 | 2018 | CAP | | No | WG CN2 | | | | | | | | | | | | | | | | | | | | | |
| 20 | 2019 | MAP | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 21 | 1513 | FS on Transport and control separation | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 22 | 1615 | Architectural impacts | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 23 | 1614 | Protocol impacts | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 24 | 1216 | Improvements of Radio Interface | NA | Yes | TSG RAN | | | | | | | | | | | | | | | | | | | | | |
| 25 | 1468 | (Copy) Node B synchronisation for TDD | | No | WG RAN1 | | | | | | | | | | | | | | | | | | | | | |
| 26 | 1470 | Improvement of inter-frequency and in | Rel5 | No | WG RAN1 | | | | | | | | | | | | | | | | | | | | | |
| 27 | 1471 | Base station classification | Rel4 | No | WG RAN4 | | | | | | | | | | | | | | | | | | | | | |
| 28 | 1476 | FDD Base station classification | | No | WG RAN4 | | | | | | | | | | | | | | | | | | | | | |
| 29 | 1477 | TDD Base station classification | | No | WG RAN4 | | | | | | | | | | | | | | | | | | | | | |

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| 30 | 1217 | Hybrid ARQ II/III | Rel5 | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | | |
| 31 | 1218 | Improved usage of downlink resource in | Rel4 | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | | |
| 32 | 1507 | Terminal Power Saving features | Rel4 | No | WG RAN1 | | | | | | | | | | | | | | | | | | | | | | |
| 33 | 1509 | UTRA repeater specification (master) | Rel4 | No | WG RAN4 | | | | | | | | | | | | | | | | | | | | | | |
| 34 | 1994 | DSCH power control improvement in sc | Rel4 | No | WG RAN1 | | | | | | | | | | | | | | | | | | | | | | |
| 35 | 1996 | UMTS 1800 | Rel4 | No | WG RAN4 | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 1506 | FS on Radio link performance enhance | | No | WG RAN1 | | | | | | | | | | | | | | | | | | | | | | |
| 37 | 1219 | FS on High Speed downlink packet acc | | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | | |
| 38 | 1221 | FS on USTS | | No | WG RAN1 | | | | | | | | | | | | | | | | | | | | | | |
| 39 | 1510 | FS on improved common DL channel fo | | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 1997 | FS on UE antenna efficiency test metho | | No | WG RAN4 | | | | | | | | | | | | | | | | | | | | | | |
| 41 | 1839 | Conformance Test Spec. improvements | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | | |
| 42 | 1222 | Low Chip Rate TDD option | Rel4 | No | WG RAN1 | | | | | | | | | | | | | | | | | | | | | | |
| 43 | 1223 | Physical layer | | No | WG RAN1 | | | | | | | | | | | | | | | | | | | | | | |
| 44 | 1224 | Layer 2 and layer 3 protocol aspects | | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | | |
| 45 | 1225 | RF radio transmission/reception, system | | No | WG RAN4 | | | | | | | | | | | | | | | | | | | | | | |
| 46 | 1227 | UE radio access capability | | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | | |
| 47 | 1228 | lub/lur protocol aspects | | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | | |
| 48 | 1911 | Start Testing | | No | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | 2103 | Testing | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 1840 | Conformance tests for Low Chip Rate TDD | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | | |
| 51 | 1841 | Protocol Conformance tests for Low Chip Rate | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | | |
| 52 | 9 | RAN improvements | NA | Yes | TSG RAN | | | | | | | | | | | | | | | | | | | | | | |
| 53 | 1466 | Smart antenna | Rel4 | No | WG RAN1 | | | | | | | | | | | | | | | | | | | | | | |
| 54 | 656 | RRM optimization for lur and lub | Rel4 | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | | |
| 55 | 655 | Node B synchronisation for TDD (Master) | Rel4 | No | WG RAN1 | | | | | | | | | | | | | | | | | | | | | | |
| 56 | 1472 | Radio access bearer support enhancem | Rel4 | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | | |
| 57 | 1680 | Header compression removal/stripping | Rel5 | No | TSG RAN | | | | | | | | | | | | | | | | | | | | | | |
| 58 | 1686 | Unequal error protection in PS domain | Rel5 | No | TSG RAN | | | | | | | | | | | | | | | | | | | | | | |

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| 59 | 1912 | Start Testing | | No | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 2102 | Testing | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 61 | 1842 | UE Conformance Test Spec. RAN improvement | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 62 | 1843 | UE Conformance Test Spec.TTCN RAN improv | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 63 | 1273 | Provisioning of IP-based multimedia s | Rel5 | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 64 | 1274 | Call control and roaming to support IP- | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 65 | 1633 | Stage 1 | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 66 | 1514 | Stage 2 (Architecture and Main flows) | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 67 | 1277 | FS on Impacts on HSS | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 68 | 1998 | IP multimedia subsystem signalling flows | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 69 | 1673 | MLST: Stage 3 for basic calls | | No | | | | | | | | | | | | | | | | | | | | | | |
| 70 | 1278 | IP multimedia subsystem stage 3 | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 71 | 1804 | SIP interactions with the Rel4 Supl Services | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 72 | 1650 | Check if any | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 73 | 1651 | Stage 3 if applicable | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 74 | 1280 | SIP SS and relationship to Mg, Mw and Cx | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 75 | 1281 | Multimedia Capabilities | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 76 | 1282 | Terminal capabilities | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 77 | 1806 | Terminal capabilities and Interactions on ru | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 78 | 1805 | Network capabilities | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 79 | 1285 | Network capabilities (N4 aspects) | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 80 | 1286 | CSCF – HSS (Cx) applications and services (SC | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 81 | 1515 | Stage 2 flows | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 82 | 2021 | Stage 2 flows (N4) (see note) | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 83 | 2023 | Impacts from CAMEL | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 84 | 1288 | Impact on Camel Stage 3 | | No | WG CN2 | | | | | | | | | | | | | | | | | | | | | |
| 85 | 1289 | Impact on MAP | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 86 | 2024 | Stage 3 protocol on Cx | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 87 | 1290 | Addressing, Identities | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |

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| 88 | 1291 | Architectural issues | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 89 | 1292 | Impact on HSS | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 90 | 1294 | Interworking with other multimedia protocols | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 91 | 1295 | Requirements | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 92 | 1296 | Impact on MM/CC/SM | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 93 | 2047 | Multimedia domain and CS networks Inter | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 94 | 2048 | Multimedia domain and IP networks Interw | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 95 | 1913 | Start Testing | | No | | | | | | | | | | | | | | | | | | | | | | |
| 96 | 1844 | UE Conformance Tests for IP-Based MM | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 97 | 1298 | Access Security for IP-multimedia servi | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 98 | 1299 | Lawful interception | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 99 | 1300 | RAN improvements and evolution of th | | No | TSG RAN | | | | | | | | | | | | | | | | | | | | | |
| 100 | 1597 | (Copy1) Ensure reliable QoS for PS don | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 101 | 1303 | Billing, charging and management aspe | | No | WG SA5 | | | | | | | | | | | | | | | | | | | | | |
| 102 | 1598 | (Copy) AMR-WB | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 103 | 1305 | Roaming between IP multimedia and C | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 104 | 1457 | Roaming requirements | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 105 | 1306 | Stage 2 | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 106 | 1307 | Stage 2 review | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 107 | 1456 | Internetwork roaming aspects | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 108 | 1807 | MExE and MMS interactions | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 109 | 1310 | Support of VHE/OSA by Rel4 network er | | No | WG CN5 | | | | | | | | | | | | | | | | | | | | | |
| 110 | 1732 | Number portability in IM subsystem | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 111 | 2036 | Multimedia codecs and protocols for cc | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 112 | 2039 | Codecs | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 113 | 2040 | performance characterisation of codec | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 114 | 2038 | protocols | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 115 | 1539 | Transparent End-to-End PS mobile str | Rel4 | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 116 | 1652 | Emergency call enhancements | NA | Yes | WG CN1 | | | | | | | | | | | | | | | | | | | | | |

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| 117 | 1653 | For IP & PS based calls | Rel5 | No | WG CN1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 118 | 1314 | Service Requirements for IP-based emergency | | No | WG SA1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 119 | 1315 | SIP emergency calls and packet emergency ca | | No | WG CN1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 120 | 1316 | Stage 2 for emergency calls and packet emerg | | No | WG SA2 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 121 | 1317 | Distinction of emergency call types to different | | No | WG CN1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 122 | 2101 | Emergency call recalling capability enhance | | No | WG CN1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 123 | 1646 | Stage 3 for emergency calls and packet emerg | | No | WG CN1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 124 | 1605 | (Copy2) Ensure reliable QoS for PS domain an | | No | WG SA2 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 125 | 1654 | For CS based calls | Rel4 | No | WG CN1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 126 | 1320 | Distinction in CS domain of emergency call typ | | No | WG SA1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 127 | 1999 | Distinction in CS domain of emergency calls to | | No | WG CN1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 128 | 1321 | Emergency call recalling capability enhance | | No | WG CN1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 129 | 1322 | Enable bearer independent CS archite | Rel4 | No | WG SA2 | [Timeline bar] Start Testing | | | | | | | | | | | | | | | | | | | | | | | |
| 130 | 1323 | Enable bearer-independent call control | | No | WG CN4 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 131 | 1516 | Architecture and Stage 2 description on 23.00% | | No | WG SA2 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 132 | 1325 | Standardisation of protocols (control & user pl | | No | WG CN3 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 133 | 1326 | Standardisation of protocols over reference pc | | No | WG CN4 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 134 | 1616 | Standardisation of detailed stage 2 description | | No | WG CN4 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 135 | 1327 | Bearer control between MSC server and MGW | | No | WG CN4 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 136 | 1328 | stage 3 - protocol issues | | No | WG CN4 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 137 | 1329 | stage 3 - parameter value issues | | No | WG CN3 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 138 | 1331 | Lawful interception | | No | WG SA3 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 139 | 1332 | Bearer Independence and codec contr | | No | WG SA4 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 140 | 1918 | Start Testing | | No | | [Timeline bar] Start Testing | | | | | | | | | | | | | | | | | | | | | | | |
| 141 | 2052 | Conformance Test Aspects | | No | WG T1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 142 | 1847 | UE Conformance test spec., Bearer independe | | No | WG T1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 143 | 1848 | UE Conformance test spec., Bearer independe | | No | WG T1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |
| 144 | 1333 | CS multimedia services | Rel4 | No | WG SA2 | [Timeline bar] Start Testing | | | | | | | | | | | | | | | | | | | | | | | |
| 145 | 1338 | Stage 1 | | No | WG SA1 | [Timeline bar] | | | | | | | | | | | | | | | | | | | | | | | |

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| 146 | 1339 | Stage 2 | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 147 | 1655 | Circuit-switched multimedia swap and | | No | WG CN3 | ◆ | | | | | | | | | | | | | | | | | | | | |
| 148 | 1335 | Call control and signalling aspects | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 149 | 1336 | Transport aspects | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 150 | 1337 | inband signalling | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 151 | 1920 | Start Testing | | No | | | | | | | | | | | | | | | | | | | | | | |
| 152 | 2056 | Conformance Test Aspects | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 153 | 1849 | UE Conformance test spec. CS multimedia ser | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 154 | 1850 | UE Conformance test spec. CS multimedia serv | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 155 | 1340 | Facsimile | Rel4 | No | WG SA1 | ■ | | | | | | | | | | | | | | | | | | | | |
| 156 | 1341 | Real Time Fax | | No | WG SA2 | ■ | | | | | | | | | | | | | | | | | | | | |
| 157 | 1808 | Terminal capabilities, AT commands | | No | WG T2 | ■ | | | | | | | | | | | | | | | | | | | | |
| 158 | 1343 | Signalling aspects (e.g. ICM) | | No | WG CN1 | ■ | | | | | | | | | | | | | | | | | | | | |
| 159 | 1648 | Service provision | | No | WG CN3 | ■ | | | | | | | | | | | | | | | | | | | | |
| 160 | 1345 | Review whether service/stage 1 aspects need | | No | WG SA1 | ■ | | | | | | | | | | | | | | | | | | | | |
| 161 | 1346 | Review whether architecture/stage 2 aspects | | No | WG SA2 | ■ | | | | | | | | | | | | | | | | | | | | |
| 162 | 2041 | Start Testing | | No | | | | | | | | | | | | | | | | | | | | | | |
| 163 | 1851 | UE Conformance test spec. Fax, Protoc | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 164 | 1517 | Global Text telephony | Rel5 | No | WG SA2 | ■ | | | | | | | | | | | | | | | | | | | | |
| 165 | 1634 | Stage 1 | | No | WG SA1 | ■ | | | | | | | | | | | | | | | | | | | | |
| 166 | 1519 | Stage 2 | | No | WG SA2 | ■ | | | | | | | | | | | | | | | | | | | | |
| 167 | 1350 | Activation and transport | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 168 | 1520 | SIP and H.324 Activation and transport | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 169 | 1521 | Data Channel Activation and transport | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 170 | 1522 | Voice Channel Activation and transport | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 171 | 1523 | Selection of transport method | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 172 | 1524 | Interworking | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 173 | 1809 | Terminal Aspects | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 174 | 1357 | USIM Aspects | | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |

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| 175 | 2096 | GTT using CS multimedia telephony | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 176 | 1915 | Start Testing | | No | | | | | | | | | | | | | | | | | | | | | | |
| 177 | 1852 | UE Conformance test spec. Global Text | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 178 | 1526 | Bearer Modification without pre-notific | Rel4 | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 179 | 1635 | Stage 1 | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 180 | 1359 | Service Modification without pre-notific | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 181 | 1360 | In call modify procedure | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 182 | 1361 | Interworking function, TAF | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 183 | 1362 | Out of band Transcoder Control | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 184 | 1363 | AT commands | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 185 | 1364 | Bearer Modification because of radio c | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 186 | 1921 | Start Testing | | No | | | | | | | | | | | | | | | | | | | | | | |
| 187 | 2057 | Conformance Test Aspects | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 188 | 1853 | UE Conformance test spec. Bearer modificator | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 189 | 1857 | UE Conformance test spec. Bearer modification | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 190 | 1367 | VHE enhancements | NA | Yes | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 191 | 1368 | Evolution of VHE concepts (Master) | NA | Yes | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 192 | 1373 | Evolution of VHE within the PS and CS Domain | Rel4 | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 193 | 1374 | Stage 1 | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 194 | 1375 | Stage 2 | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 195 | 1376 | Terminal impacts | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 196 | 1404 | Introduction of VHE within the IM subsystem | Rel5 | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 197 | 1405 | Stage 1 | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 198 | 1406 | Interaction between SIP and VHE/OSA | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 199 | 1407 | Stage 2 | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 200 | 1408 | Stage 3 -MM/CC aspects | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 201 | 1409 | Stage 3 -other aspects | | No | WG CN5 | | | | | | | | | | | | | | | | | | | | | |
| 202 | 1410 | Interaction between HSS and gsmSCF fea | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 203 | 1411 | Stage 2 | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |

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| 233 | 1429 | internal OSA APIs | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | | |
| 234 | 1430 | User requirements | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | | |
| 235 | 1530 | Technical requirements | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | | |
| 236 | 1432 | Stage 3 | | No | WG CN5 | | | | | | | | | | | | | | | | | | | | | | |
| 237 | 1419 | OSA security | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | | |
| 238 | 1420 | Technical requirements | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | | |
| 239 | 1421 | Stage 3 | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | | |
| 240 | 1422 | security related SCF(s) definition | | No | WG CN5 | | | | | | | | | | | | | | | | | | | | | | |
| 241 | 1423 | (possibly) changes required from supporting pl | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | | |
| 242 | 1621 | impact on terminal | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | | |
| 243 | 1433 | Enhancement of the Framework Servic | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | | |
| 244 | 1434 | User requirements | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | | |
| 245 | 1531 | Technical requirements | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | | |
| 246 | 1436 | Stage 3 | | No | WG CN5 | | | | | | | | | | | | | | | | | | | | | | |
| 247 | 1437 | Harmonisation/co-ordination with non I | | No | WG CN5 | | | | | | | | | | | | | | | | | | | | | | |
| 248 | 1786 | LCS application interfaces (LCS-OSA) (I | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | | |
| 249 | 1787 | Service description | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | | |
| 250 | 1788 | Stage 2 | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | | |
| 251 | 1638 | CAMEL phase 4 | Rel5 | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | | |
| 252 | 1461 | Service requirements | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | | |
| 253 | 2011 | Charging notification to the CSE | | No | WG CN2 | | | | | | | | | | | | | | | | | | | | | | |
| 254 | 2012 | Call Party Handling | | No | WG CN2 | | | | | | | | | | | | | | | | | | | | | | |
| 255 | 2013 | Mid call procedure for MO and MT calls | | No | WG CN2 | | | | | | | | | | | | | | | | | | | | | | |
| 256 | 2014 | Interactions with Optimal Routing | | No | WG CN2 | | | | | | | | | | | | | | | | | | | | | | |
| 257 | 2015 | Inclusion of flexible tone injection | | No | WG CN2 | | | | | | | | | | | | | | | | | | | | | | |
| 258 | 2016 | CSE control over MT SMS | | No | WG CN2 | | | | | | | | | | | | | | | | | | | | | | |
| 259 | 2017 | CAMEL applicability to media streams I | | No | WG CN2 | | | | | | | | | | | | | | | | | | | | | | |
| 260 | 1445 | MExE enhancements | NA | Yes | WG T2 | | | | | | | | | | | | | | | | | | | | | | |
| 261 | 1447 | MExE Security | Rel4 | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | | |

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| 262 | 2045 | Stage 3 | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 263 | 1448 | Terminal aspects | | No | WG T2 | █ | | | | | | | | | | | | | | | | | | | | |
| 264 | 1810 | MExE Improvements and Investigations | Rel4 | No | WG T2 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 265 | 1449 | Stage 3 | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 266 | 1811 | Support of the Terminal parts of the VHE /User | | No | WG T2 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 267 | 1812 | 3rd MExE classmark | | No | WG T2 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 268 | 1813 | FS on AT command support | | No | WG T2 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 269 | 1814 | FS on Secure download mechanism and capat | | No | WG T2 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 270 | 1815 | FS on Support of MP3/MPEG4 content | | No | WG T2 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 271 | 1816 | FS on Support of SAT/OSA/CAMEL interaction | | No | WG T2 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 272 | 1817 | Enhanced security | | No | WG T2 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 273 | 1625 | Wideband Telephony Service - AMR (I | Rel4 | No | WG SA4 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 274 | 62 | Specification | | No | WG SA4 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 275 | 1459 | Design Constraints | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 276 | 1460 | General Description | | No | WG SA4 | █ | | | | | | | | | | | | | | | | | | | | |
| 277 | 1626 | Feasibility Study | | No | WG SA4 | █ | █ | | | | | | | | | | | | | | | | | | | |
| 278 | 67 | Codec issues | | No | WG SA4 | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 279 | 1627 | Codec qualification | | No | WG SA4 | █ | | | | | | | | | | | | | | | | | | | | |
| 280 | 74 | Codec selection tests | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 281 | 891 | Codec selection | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 282 | 890 | Other codec issues | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 283 | 1989 | Start Testing | | No | | | | | | | | | | | | | | | | | | | | | | |
| 284 | 1855 | Conformance tests (CRs to 34 series) | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 285 | 76 | Terminal Acoustic Characteristics | | No | WG SA4 | █ | | | | | | | | | | | | | | | | | | | | |
| 286 | 1628 | Definition | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 287 | 1629 | Test specification | | No | WG SA4 | █ | | | | | | | | | | | | | | | | | | | | |
| 288 | 889 | Implementation | | No | WG SA4 | | | | | | | | | | | | | | | | | | | | | |
| 289 | 893 | In UTRAN | | No | TSG RAN | | | | | | | | | | | | | | | | | | | | | |
| 290 | 80 | In GERAN | | No | WG GERAN | | | | | | | | | | | | | | | | | | | | | |

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| 320 | 1827 | AT commands | Rel4 | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 321 | 1828 | Specification of AT commands for new service | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 322 | 917 | Alternatives to AT commands (TBD) | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 323 | 1858 | UE Conformance test spec. AT command | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 324 | 1859 | EMMI Specification (see note) | | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | |
| 325 | 1829 | Wide Area Data Synchronisation | Rel5 | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 326 | 1830 | Continues evolution of Synchronisation protocol | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 327 | 1831 | vObjects and Other Constructs for Use in Data | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 328 | 1860 | UE Conformance test spec. Wide area data syn | | No | WG T1 | | | | | | | | | | | | | | | | | | | | | |
| 329 | 1832 | Terminal local model | Rel4 | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 330 | 1536 | Location Services enhancements | NA | Yes | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 331 | 512 | FS on Geographical Area description: LCS | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 332 | 1171 | Event based and Periodic LCS | Rel5 | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 333 | 1641 | Stage 1 | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 334 | 1538 | Stage 2 specification | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 335 | 1179 | Impact on MAP | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 336 | 519 | LCS network management in UMTS | | No | WG SA5 | | | | | | | | | | | | | | | | | | | | | |
| 337 | 521 | New security aspects of LCS (not identified) | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 338 | 523 | LCS support in the CS domain | Rel4 | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 339 | 525 | LCS support in the PS domain | Rel4 | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 340 | 1642 | Stage 1 | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 341 | 1181 | Stage 2 | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 342 | 1180 | Stage 3 | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 343 | 526 | Layer 3 LCS signaling UE (MS) -SGSN (UMTS) | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 344 | 527 | GTP signaling for LCS | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 345 | 544 | LCS interoperation stage 2 aspects | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 346 | 1916 | MExE and CBS interactions | Rel4 | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 347 | 1600 | UE positioning | Rel4 | No | TSG RAN | | | | | | | | | | | | | | | | | | | | | |
| 348 | 1601 | Iub/Iur interfaces for methods Rel 99 | | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | |

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| 349 | 1602 | UE positioning enhancements | | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | |
| 350 | 1603 | (Copy) UTRA repeater specification | | No | WG RAN4 | | | | | | | | | | | | | | | | | | | | | |
| 351 | 1796 | (Copy) LCS application interfaces (LCS- | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 352 | 1183 | FS on LCS support in the IM CN subsyst | | No | WG SA1 | | | | | | | | | | | | | | | | | | | | | |
| 353 | 1542 | Ensure reliable QoS for PS domain (M | Rel4 | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 354 | 1543 | stage 2 for End-to-end QoS (re)negotiat | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 355 | 1658 | stage 3 for End-to-end QoS (re)negotiat | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 356 | 1545 | GMM and SM aspects | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 357 | 1546 | GTP aspects | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 358 | 1547 | Mapping of end to end QoS parameters | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 359 | 1548 | Impacts on N4 documents | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 360 | 1549 | Impacts on N3 documents | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 361 | 1681 | RAB Quality of Service (re)Negotiation over lu | | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | |
| 362 | 1991 | RAB Quality of Service Negotiation over lu | | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | |
| 363 | 1992 | RAB Quality of Service Re-Negotiation ove | | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | |
| 364 | 1685 | PS-domain handover for real-time serv | | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | |
| 365 | 1550 | Interactions between external mechanis | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 366 | 1551 | Possible new code points in QoS IE fro | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 367 | 1659 | Possible new code points in QoS IE for | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 368 | 1660 | Mapping between the QoS UMTS point | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 369 | 1552 | Charging aspects | | No | WG SA5 | | | | | | | | | | | | | | | | | | | | | |
| 370 | 1624 | Security aspects | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 371 | 1619 | Application aspects, multi-mode aspect | | No | WG T2 | | | | | | | | | | | | | | | | | | | | | |
| 372 | 1553 | GERAN QoS Aspects | | No | WG GERAN | | | | | | | | | | | | | | | | | | | | | |
| 373 | 1554 | Evolution of maximum SDU size | | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |
| 374 | 1555 | Impacts on CN protocols (e.g., GTP, MAP) | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 375 | 1556 | Impact on interworking over GTP e.g. PPP | | No | WG CN3 | | | | | | | | | | | | | | | | | | | | | |
| 376 | 1611 | Admission control function triggers | | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | |
| 377 | 1557 | QoS for CS services at HOs (inter-MS) | Rel4 | No | WG SA2 | | | | | | | | | | | | | | | | | | | | | |






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| 378 | 1558 | UTRAN aspects | | No | WG RAN2 | | | | | | | | | | | | | | | | | | | | | |
| 379 | 1559 | GERAN aspects | | No | WG GERAN | | | | | | | | | | | | | | | | | | | | | |
| 380 | 1560 | UICC/(U)SIM enhancements and interworking | NA | Yes | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 381 | 1798 | FS on UICC/ME Performance Enhancements | | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 382 | 1562 | UICC/USIM database specification | Rel4 | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 383 | 1799 | Common PCN Handset Specification (Common PCN) | Rel4 | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 384 | 1564 | report on SIM/USIM Interworking | | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 385 | 1800 | (U)SIM toolkit enhancements | NA | Yes | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 386 | 1566 | Enhancements to (U)SIM toolkit security | Rel4 | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 387 | 1801 | Protocol Standardisation of a SIM Toolkit | Rel4 | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 388 | 2034 | USAT local link | Rel4 | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 389 | 1802 | UICC API | NA | Yes | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 390 | 2029 | Java API | Rel4 | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 391 | 1803 | Test specification | | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 392 | 2031 | Multos API | Rel5 | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 393 | 2032 | Specification | | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 394 | 2033 | Test specification | | No | WG T3 | | | | | | | | | | | | | | | | | | | | | |
| 395 | 2100 | USIM Toolkit security | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 396 | 1571 | Security enhancements | NA | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 397 | 2099 | UE triggered authentication during connection | Rel4 | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 398 | 1587 | Evolution of GSM CS algorithms (e.g. A5) | Rel4 | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 399 | 1588 | Evolution of GSM PS algorithms (e.g. GPRS) | Rel4 | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 400 | 1589 | Main aspects | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 401 | 1618 | Impact on GTP | | No | WG CN4 | | | | | | | | | | | | | | | | | | | | | |
| 402 | 1661 | GEA capability indication in MS CM | | No | WG CN1 | | | | | | | | | | | | | | | | | | | | | |
| 403 | 1572 | Protection for user plane data | Rel5 | Yes | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 404 | 1573 | Integrity protection in access network | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 405 | 1575 | Network based end-to-end security | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | |
| 406 | 1576 | Network domain security | | Yes | WG SA3 | | | | | | | | | | | | | | | | | | | | | |




| ID | Unique ID | Name | Release | Split | Resource | Qtr 2, 2000 | | | Qtr 3, 2000 | | | Qtr 4, 2000 | | | Qtr 1, 2001 | | | Qtr 2, 2001 | | | Qtr 3, 2001 | | | Qtr 4, 2001 | | | |
|-----|-------------|---|-------------|------------|----------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|--|
| | | | | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| 436 | 2093 | Key Administration & Distribution (Master) | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | | |
| 437 | 2094 | Co-ordination O&M messaging Specification | | No | WG RAN3 | | | | | | | | | | | | | | | | | | | | | | |
| 438 | 2088 | Performance Management (Master) | | No | WG SA5 | | | | | | | | | | | | | | | | | | | | | | |
| 439 | 2081 | Fault Management (Master) | | No | WG SA5 | | | | | | | | | | | | | | | | | | | | | | |
| 440 | 2082 | Configuration Management (Master) | | No | WG SA5 | | | | | | | | | | | | | | | | | | | | | | |
| 441 | 2083 | Charging Management (Master) | | No | WG SA5 | | | | | | | | | | | | | | | | | | | | | | |
| 442 | 1924 | GERAN definition (to be dispatched to | NA | Yes | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 443 | 1925 | Evolution of transport in UTRAN and GE | ? | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 444 | 1926 | Addition of transport mechanisms other than A | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 445 | 1927 | GERAN/UTRAN interface evolution | Rel4 | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 446 | 1929 | Evolution of lu ps | | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 447 | 1930 | Identification of GERAN requirements on lu | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 448 | 1932 | Update of specifications | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 449 | 1933 | Evolution of lu cs | | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 450 | 1934 | Identification of GERAN requirements on lu | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 451 | 1935 | Update of specifications | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 452 | 1936 | Evolution of interface A | | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 453 | 1937 | Identification of GERAN requirements on lu | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 454 | 1938 | Update of specifications | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 455 | 1987 | Low chip rate TDD for UTRAN | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 456 | 1939 | Gb over IP | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 457 | 1940 | Enhance cell reselections | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 458 | 1941 | GERAN radio interface evolution | | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 459 | 1942 | Overall concept for GERAN | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 460 | 1943 | GERAN Header adaptation | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 461 | 1945 | GERAN Radio access bearer design | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 462 | 1946 | GERAN user / control plane | | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 463 | 1983 | PDCP protocol design | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 464 | 1986 | RLC / MAC Specification | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |

| ID | Unique ID | Name | Release | Split | Resource | Qtr 2, 2000 | | | Qtr 3, 2000 | | | Qtr 4, 2000 | | | Qtr 1, 2001 | | | Qtr 2, 2001 | | | Qtr 3, 2001 | | | Qtr 4, 2001 | | | |
|-----|-------------|--|---------|-----------|----------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|--|
| | | | | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| 465 | 1985 | Physical layer | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 466 | 1947 | GERAN RR | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 467 | 1948 | Iur-g interface | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 468 | 1949 | Voice over GERAN PS and CS concept | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 469 | 1950 | GERAN Narrowband speech realization | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 470 | 1951 | GERAN security | | No | WG SA3 | | | | | | | | | | | | | | | | | | | | | | |
| 471 | 1982 | Working assumptions for ciphering | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 472 | 1981 | Requirements for integrity | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 473 | 1980 | Modification of UTRAN specs to be valid a | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 474 | 1979 | Additional stage 3 work for GERAN | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 475 | 2060 | Start Testing | | No | | | | | | | | | | | | | | | | | | | | | | | |
| 476 | 1952 | GERAN MS Conformance test for GERAN | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 477 | 1953 | GERAN BTS Conformance test for GERAN | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 478 | 1954 | 700 MHz spectrum support | | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 479 | 1955 | GERAN support for the 700 MHz band | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 480 | 1956 | GERAN MS Conformance test for 700 MHz | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 481 | 1958 | GERAN BTS Conformance test for GERAN | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 482 | 1959 | Real Time QoS for packet services including Vo | | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 483 | 1960 | HOS: maintenance of real-time QoS while i | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 484 | 1961 | Wideband telephony services | | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 485 | 1963 | Support of WB AMR in GERAN | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 486 | 1965 | GERAN MS Conformance test for WB AMR | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 487 | 1966 | GERAN BTS Conformance test for WB AMR | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 488 | 1968 | Location service (UMTS) (using GERAN) | Rel4 | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 489 | 1969 | LCS interoperability aspects to GERAN | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 490 | 1970 | LCS in GERAN | | No | G GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 491 | 1975 | GERAN LCS stage 2 | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 492 | 1974 | Iur-g interface support for LCS GERAN | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |
| 493 | 1973 | Gb,A interface support for LCS GERAN | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | | |

| ID | Unique ID | Name | Release | Split | Resource | Qtr 2, 2000 | | | Qtr 3, 2000 | | | Qtr 4, 2000 | | | Qtr 1, 2001 | | | Qtr 2, 2001 | | | Qtr 3, 2001 | | | Qtr 4, 2001 | | |
|-----|-----------|---|---------|-------|----------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|
| | | | | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| 494 | 1977 | lu-cs(?), lu-ps interface support for LCS G | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | |
| 495 | 1978 | Radio Resource Management (for LCS GE | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | |
| 496 | 1976 | Stage 3 specifications | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | |
| 497 | 2061 | Start Testing | | No | | | | | | | | | | | | | | | | | | | | | | |
| 498 | 1971 | GERAN MS Conformance test for LCS | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | |
| 499 | 1972 | GERAN BTS Conformance test for LCS | | No | iG GERAN | | | | | | | | | | | | | | | | | | | | | |
| 500 | 2062 | Subscription Management | Rel4 | No | WG SA5 | | | | | | | | | | | | | | | | | | | | | |
| 501 | 2071 | UTRAN Operations and Maintenance p | Rel4 | No | WG SA5 | | | | | | | | | | | | | | | | | | | | | |
| 502 | 1993 | small Technical Enhancements and Im | Rel4 | No | | | | | | | | | | | | | | | | | | | | | | |

Project: 3GPP_Work Plan
Date: Tue 07/11/00

Task 
Task Progress 
Critical Task 
Critical Task Progress 
Milestone 

Summary 
Rolled Up Task 
Rolled Up Critical Task 
Rolled Up Milestone 
Rolled Up Progress 

Split 
External Tasks 
Project Summary 
Summary Progress 