**Third Generation Partnership Project (3GPP™)**

**Meeting Report  
for  
TSG SA WG3  
meeting: 109**

**Toulouse, France, 14/11/2022 to 18/11/2022**

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## 1 Agenda and Meeting Objectives

The attention of the delegates to the meeting of this Technical Specification Group was drawn to the fact that 3GPP Individual Members have the obligation under the IPR Policies of their respective Organizational Partners to inform their respective Organizational Partners of Essential IPRs they become aware of.

The delegates were asked to take note that they were thereby invited:

to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.

to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Information Statement and the Licensing declaration forms. The attention of the delegates to the meeting was drawn to the fact that 3GPP activities were subject to all applicable antitrust and competition laws and that compliance with said laws was therefore required by any participant of the meeting, including the Chairman and Vice-Chairmen and were invited to seek any clarification needed with their legal counsel. The leadership would conduct the present meeting with impartiality and in the interests of 3GPP. Delegates were reminded that timely submission of work items in advance of TSG/WG meetings was important to allow for full and fair consideration of such matters. Delegates were reminded of the fair network use rules established by the PCG:

1. Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws.

2. Users shall not engage in non-work-related activities that are consume excessive bandwidth or cause significant degradation of the performance of the network.

**S3-223140 Agenda**

*Type: agenda For: (not specified)  
 Source: SA WG3 Chair*

**Discussion:**

The WG Chair welcomed the attendees and thanked for their attendance after three years of remote meetings.

A video from the Toulouse mayor of Toulouse was shown. Mireille (Thales) gave the welcome speech on behalf of 3GPP.

**Decision:** The document was **approved**.

**S3-223143 Process for SA3#109**

*Type: other For: (not specified)  
 Source: SA WG3 Chair*

**Decision:** The document was **noted**.

**S3-223145 Process and agenda planning for SA3#109**

*Type: other For: (not specified)  
 Source: SA WG3 Chair*

**Decision:** The document was **noted**.

## 2 Meeting Reports

**S3-223141 Report from SA3#108e**

*Type: report For: (not specified)  
 Source: MCC*

**Decision:** The document was **approved**.

**S3-223142 Report for SA3#108e ad-Hoc**

*Type: other For: (not specified)  
 Source: SA WG3 Chair*

**Decision:** The document was **approved**.

**S3-223144 Report from last SA**

*Type: report For: (not specified)  
 Source: SA WG3 Chair*

**Discussion:**

Christine asked about stage 2 freeze dates and SA3 dependency on SA2. Suresh clarified that this dependency is well understood in SA2.

**Decision:** The document was **noted**.

## 3 Reports and Liaisons from other Groups

**S3-223148 LS on clarification for UE\_NOT\_FOUND cause code for UP in CT1**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C1-226279*

**Decision:** The document was **replied to in S3-223903**.

**S3-223317 LS Reply on UE\_NOT\_FOUND cause code**

*Type: LS out For: Approval  
 to CT1, cc CT4  
 Source: InterDigital, Europe, Ltd.*

**Discussion:**

Helena (Ericsson): this LS is for Rel-18 and they have frozen the specifications in Rel-17.

It was decided to discuss this in the related CRs.

**Decision:** The document was **revised to S3-223903**.

**S3-223903 LS Reply on UE\_NOT\_FOUND cause code**

*Type: LS out For: Approval  
 to CT1, cc CT4  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-223317)

**Decision:** The document was **revised**.

**S3-223149 LS on user’s consent for EDGEAPP**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C3-223780*

**Decision:** The document was **replied to in S3-223904**.

**S3-223181 Reply LS on user’s consent for EDGEAPP**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S6-222555*

**Decision:** The document was **noted**.

**S3-223620 Reply LS on user’s consent for EDGEAPP (S3-223149)**

*Type: LS out For: Approval  
 to CT3, cc SA2, SA6, CT4  
 Source: Apple*

**Decision:** The document was **merged**.

**S3-223649 [DRAFT] Reply LS on user’s consent for EDGEAPP**

*Type: LS out For: Approval  
 to CT3, cc SA2, SA6, CT4  
 Source: Ericsson*

**Decision:** The document was **merged**.

**S3-223482 Reply LS on User Consent for EDGEAPP**

*Type: LS out For: Approval  
 to CT3, cc SA2, SA6, CT4  
 Source: Huawei, HiSilicon*

**Discussion:**

Vodafone: user consent better left for regulators.

**Decision:** The document was **revised to S3-223904**.

**S3-223904 Reply LS on User Consent for EDGEAPP**

*Type: LS out For: Approval  
 to CT3, cc SA2, SA6, CT4  
 Source: Huawei, HiSilicon*

(Replaces S3-223482)

**Decision:** The document was **approved**.

**S3-223162 Reply LS on the user consent for trace reporting**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R3-225250*

**Discussion:**

Ericsson didn’t agree with Apple's and Huawei's proposal.

**Decision:** The document was **postponed**.

**S3-223229 Reply LS to Reply LS on the user consent for trace reporting**

*Type: LS out For: (not specified)  
 to RAN3, cc RAN2, SA5, SA1, RAN  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-223905**.

**S3-223905 Reply LS to Reply LS on the user consent for trace reporting**

*Type: LS out For: -  
 to RAN3, cc RAN2, SA5, SA1, RAN  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223229)

**Decision:** The document was **noted**.

**S3-223621 Reply LS on the user consent for trace reporting (S3-223162)**

*Type: LS out For: Approval  
 to RAN3, cc RAN2, SA5, SA1, RAN  
 Source: Apple*

**Decision:** The document was **merged**.

**S3-223492 Reply LS on the User Consent for Trace Reportings**

*Type: LS out For: Approval  
 to RAN3, cc RAN2, SA5, SA1, RAN  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223163 LS on user consent of Non-public Network**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R3-226006*

**Discussion:**

Qualcomm: user content not important if the user is not human.

Ericsson: better handle it next meeting. There is no reply submitted to this meeting.

The Chair commented that better not to postpone.

**Decision:** The document was **postponed**.

**S3-223906 Reply to: LS on user consent of Non-public Network**

*Type: LS out For: approval  
 to RAN3, cc RAN2,SA5  
 Source: Qualcomm*

**Decision:** The document was **noted**.

**S3-223178 LS on User consent for Application Detection**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2209973*

**Discussion:**

Ericsson: user consent not applicable here.

Huawei: check SA2's info. If the SUPI is connected the user consent is needed.

Interdigital agreed that user consent was needed.

Vodafone: we would end up pressing content for everything and I'm not sure we need to standardise this as it is done in the handset anyway.

**Decision:** The document was **replied to in S3-223907**.

**S3-223454 Reply LS on User consent for Application Detection**

*Type: LS out For: Approval  
 to SA2  
 Source: OPPO*

**Decision:** The document was **merged**.

**S3-223686 Reply LS on User consent for Application Detection**

*Type: LS out For: Approval  
 to SA2  
 Source: Ericsson*

**Discussion:**

Qualcomm supported Ericsson's proposal.

**Decision:** The document was **revised to S3-223907**.

**S3-223907 Reply LS on User consent for Application Detection**

*Type: LS out For: Approval  
 to SA2  
 Source: Ericsson*

(Replaces S3-223686)

**Decision:** The document was **approved**.

**S3-223179 Reply LS on User Consent Updating**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S5-225321*

**Decision:** The document was **noted**.

**S3-223151 LS on Authentication Result Removal**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C4-224418*

**Discussion:**

Nokia preferred Ericsson's view.

Huawei commented that SA3 could align with CT4.

Ericsson: SA3 didn’t see a need some years ago. Remove it from stage 3 to avoid CT's work and then SA3 checking it out.

BT: this is a security function without a stage 2 requirement. IT should be removed.

**Decision:** The document was **postponed**.

**S3-223609 Reply LS on autentication result removal**

*Type: LS out For: Approval  
 to CT4  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223833 Reply LS on Authentication Result Removal**

*Type: LS out For: Approval  
 to CT4  
 Source: Ericsson*

**Decision:** The document was **revised to S3-223908**.

**S3-223908 Reply LS on Authentication Result Removal**

*Type: LS out For: Approval  
 to CT4  
 Source: Ericsson*

(Replaces S3-223833)

**Decision:** The document was **noted**.

**S3-223152 Reply LS on PLMN ID used in Roaming Scenarios**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C4-224444*

**Decision:** The document was **postponed**.

**S3-223165 Reply LS On PLMN ID used in Roaming Scenarios**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2207391*

**Decision:** The document was **postponed**.

**S3-223204 Reply LS on PLMN ID used in Roaming Scenarios**

*Type: LS out For: (not specified)  
 to CT4, SA2, cc GSMA 5GMRR  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223909 Reply LS on PLMN ID used in Roaming Scenarios**

*Type: LS out For: -  
 to CT4, SA2, cc GSMA 5GMRR  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **withdrawn**.

**S3-223153 Reply LS on handling of the modification policy in the IPX and receiving SEPP**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C4-224467*

**Decision:** The document was **noted**.

**S3-223157 LS to 3GPP - Hosted SEPP**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: GSMA*

**Decision:** The document was **replied to in S3-223910**.

**S3-223386 LS to GSMA DESS on SEPP certificates**

*Type: LS out For: Approval  
 to GSMA  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-223910**.

**S3-223910 LS to GSMA DESS on SEPP certificates**

*Type: LS out For: Approval  
 to GSMA  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223386)

**Decision:** The document was **approved**.

**S3-223676 Discussion paper on SEPP inter-domain certificate on N32 interface**

*Type: discussion For: Endorsement  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-223154 LS on Indication of Network Assisted Positioning method**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C4-224626*

**Decision:** The document was **noted**.

**S3-223155 Reply LS on Facilitating roaming adoption across 3GPP NPN deployments**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C6-220475*

**Decision:** The document was **noted**.

**S3-223183 Reply LS on Facilitating roaming adoption across 3GPP NPN deployments**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: SP-220985*

**Decision:** The document was **noted**.

**S3-223185 Facilitating roaming adoption across 3GPP NPN deployment**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: WBA*

**Decision:** The document was **noted**.

**S3-223156 Completion of SGP.22 v3.0**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: GSMA*

**Decision:** The document was **noted**.

**S3-223159 Re-use of CAPIF by ETSI MEC**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ETSI ISG MEC*

**Decision:** The document was **noted**.

**S3-223195 Reply LS on Re-use of CAPIF by ETSI MEC**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S6-223027*

**Decision:** The document was **noted**.

**S3-223160 Reply LS on null security algorithm**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R2-2208832*

**Decision:** The document was **noted**.

**S3-223161 Reply LS on authenticity and replay protection of system information**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R2-2208985*

**Decision:** The document was **postponed**.

**S3-223166 LS on protection of the URSP rules from HPLMN**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2207501*

**Decision:** The document was **replied to in S3-223911**.

**S3-223472 Reply LS about Protection of URSP rules from HPLMN**

*Type: LS out For: Approval  
 to SA2, cc CT1  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223801 Reply to LS on protection of the URSP rules from HPLMN**

*Type: LS out For: (not specified)  
 to SA2, cc CT1  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **merged**.

**S3-223740 Discussion on protection of the URSP rules from HPLMN**

*Type: discussion For: Discussion  
 33.501 v..  
 Source: Samsung*

**Discussion:**

Samsung: no possibility of changing the access technology type would be the attack scenario here.

Qualcomm: Observation 1 not correct. VPLMN can change the traffic routing.

Vodafone: I don’t agree with observation 1.

Cable Labs: we support Qualcomm's proposal.

BT: The threat exists but there are easier ways for the VPLMN to override this. If we don’t trust the VPLMN to do this what do we trust it for? I don’t see the value of this one.

VPLMN can be trusted for URSP rules: Docomo, Cable Labs, Huawei, Qualcomm,Thales, Deutsche Telekom, BT, Vodafone,China Mobile, Charter communications.

VPLMN cannot be trusted, URSP rules need to be protected: Samsung, Interdigital, Nokia,Lenovo, Phillips.

BT commented that all operators are the ones who take the risk here, it’s them who decide who to trust.

**Decision:** The document was **noted**.

**S3-223379 Reply LS on protection of the URSP rules from HPLMN**

*Type: LS out For: Approval  
 to SA2, cc CT1  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-223911**.

**S3-223911 Reply LS on protection of the URSP rules from HPLMN**

*Type: LS out For: Approval  
 to SA2, cc CT1  
 Source: Qualcomm Incorporated*

(Replaces S3-223379)

**Decision:** The document was **approved**.

**S3-223173 LS on impact of URSP rule enforcement report to 5GC**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2209327*

**Decision:** The document was **postponed**.

**S3-223622 LS on impact of URSP rule enforcement report to 5GC (S3-223173)**

*Type: LS out For: Approval  
 to SA2  
 Source: Apple*

**Decision:** The document was **merged**.

**S3-223298 Reply LS on impact to URSP rules enforcement report to 5GC**

*Type: LS out For: Approval  
 to SA WG2  
 Source: vivo*

**Discussion:**

ORANGE: what’s the privacy issue?

Vivo: it can check how frequeht reports are.

Vodafone: UE reporting something because we don’t trust it and by doing that, we have privacy concerns.

Google: Questions 1 and 3 are OK, but we see a privacy issue here. There is a very detailed profile for the UE. URSP is not known by the user,

Qualcomm: we don’t see the privacy issue here. The rules are provided by the operator, who knows what needs to be provided by the UE,

Huawei: we don’t see privacy issues in question 1. NAS signal is protected against eavesdroppers. We don’t see an issue in question 2 either.

Interdigital: we trust the UE for some things and we don’t trust the UE for other things. It's strange.

Vodafone: the UE can be trusted and such mechanism is not needed.

Google agreed that there was no issue to be fixed here. Misbehaving UE can be dealt with in RAN5.

**Decision:** The document was **revised to S3-223912**.

**S3-223912 Reply LS on impact to URSP rules enforcement report to 5GC**

*Type: LS out For: Approval  
 to SA WG2  
 Source: vivo*

(Replaces S3-223298)

**Decision:** The document was **noted**.

**S3-223800 Discussion paper on a way forward for LS on protection of the URSP rules from HPLM**

*Type: discussion For: Discussion  
 33.892 v..  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223167 Reply LS on Inter-PLMN Handover of VoLTE calls and idle mode mobility of IMS sessions**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2207697*

**Decision:** The document was **noted**.

**S3-223184 LS from NG to 3GPP SA3 on IMS Data Channel Security Mode**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: GSMA*

**Decision:** The document was **replied to in S3-223913**.

**S3-223844 Reply LS on the IMS Data Channel Security Mode**

*Type: LS out For: Approval  
 to GSMA, cc SA2  
 Source: Ericsson*

**Discussion:**

Nokia: LI aspects to be handled in SA3-LI?

BT: end to end would be an issue. IF you can turn it off or provide the keys it should be OK.

**Decision:** The document was **revised to S3-223913**.

**S3-223913 Reply LS on the IMS Data Channel Security Mode**

*Type: LS out For: Approval  
 to GSMA NG/UPG, cc SA2,SA3-LI  
 Source: Ericsson*

(Replaces S3-223844)

**Decision:** The document was **approved**.

**S3-223169 LS Reply on EAC Mode for NSAC**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2209260*

**Discussion:**

Huawei clarified that there was no change in SA3 specs.

**Decision:** The document was **noted**.

**S3-223170 Response LS on Identifier availability for Lawful Interception during Inter-PLMN handover**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2209262*

**Decision:** The document was **noted**.

**S3-223862 Response LS on Identifier availability for Lawful Interception during Inter-PLMN handover**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S3i220660*

**Decision:** The document was **noted**.

**S3-223171 Response LS on Clarifications for AF specific UE ID retrieval**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2209270*

**Decision:** The document was **noted**.

**S3-223180 Forward on S6-222332, LS on Network federation interface for Telco edge consideration**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S6-222543*

**Decision:** The document was **replied to in S3-223914**.

**S3-223584 Reply LS on Network federation interface for Telco edge consideration**

*Type: LS out For: Approval  
 to 3GPP SA6, 3GPP SA2, 3GPP SA5, 3GPP SA, cc 3GPP CT, 3GPP CT1, 3GPP CT3, 3GPP CT4  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson had issues with point 3 to be taken offline.

Nokia had also issues with point 3.

**Decision:** The document was **revised to S3-223914**.

**S3-223914 Reply LS on Network federation interface for Telco edge consideration**

*Type: LS out For: Approval  
 to 3GPP SA6, 3GPP SA2, 3GPP SA5, 3GPP SA, cc 3GPP CT, 3GPP CT1, 3GPP CT3, 3GPP CT4  
 Source: Huawei, HiSilicon*

(Replaces S3-223584)

**Decision:** The document was **approved**.

**S3-223174 LS on Satellite coverage data transfer to a UE using UP versus CP**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2209684*

**Decision:** The document was **noted**.

**S3-223176 LS on Time Synchronization Status notification towards UE(s)**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2209876*

**Decision:** The document was **postponed**.

**S3-223213 Reply LS on Time Synchronization Status notification towards UE(s)**

*Type: LS out For: Information  
 to 3GPP SA WG2, cc 3GPP RAN WG1  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-223915**.

**S3-223915 Reply LS on Time Synchronization Status notification towards UE(s)**

*Type: LS out For: Information  
 to 3GPP SA WG2, cc 3GPP RAN WG1  
 Source: Nokia, Nokia Shanghai Bell,Ericsson*

(Replaces S3-223213)

**Decision:** The document was **noted**.

**S3-223848 Reply LS on Time Synchronization Status notification towards UE(s)**

*Type: LS out For: Approval  
 to SA2, cc RAN1, RAN2, RAN3  
 Source: Ericsson*

**Discussion:**

Huawei needed time to consider this.

**Decision:** The document was **merged**.

**S3-223177 Reply LS on User plane solution for 5GC information exposure to UE**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2209910*

**Decision:** The document was **noted**.

**S3-223147 5G capabilities exposure for factories of the future - identified gaps**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: 5G-ACIA*

**Discussion:**

The Chair commented that SA will answer to the GSMA. There was no time to gather all answers to 5G-ACIA so it was decided to postpone for the next meeting encouraging all parties interested in solving all these questions.

**Decision:** The document was **postponed**.

**S3-223182 LS on new work item X.5Gsec-ctrl: Security controls for operation and maintenance of 5G network systems**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ITU-T SG17*

**Decision:** The document was **noted**.

**S3-223199 TCG progress - report from TCG rapporteur**

*Type: other For: Information  
 Source: InterDigital, Inc.*

**Abstract:**

This contribution provides a brief incremental summary of the progress in TCG Working Groups as of November 2022.

**Discussion:**

Alec (Interdigital) presented this report.

1. TCG – Highlights

Publication of new or revised deliverables (incremental changes from the status reported at SA3#108-e)

• TCG Measurement and Attestation RootS (MARS) Library – publication Q4 2022

• TCG Component Class Registry – public review October 2022

• TCG Storage Component Class Registry – public review October 2022

• TCG PC Client Platform Physical Presence Interface – public review July 2022

• TCG DICE Endorsement Architecture for Devices – public review May 2022

• TCG EK Credential Profile for TPM 2.0 – public review March 2022

• TCG Cyber Resilient Module & Building Block Requirements – public review March 2022

• TCG Canonical Event Log Format – published February 2022

2. Meetings

• TCG Members Meeting Hybrid F2F (Vancouver, BC) 21-23 February 2022

• MP WG meets every Monday at 10-11 ET

• TMS WG meets every Monday and Friday at 12-13 ET

• CyRes WG meets every Wednesday at 11-12:30 ET

3. Conclusion

**Decision:** The document was **noted**.

**S3-223612 LS to inform about the new GSMA Task Force**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: GSMA*

**Discussion:**

IIT Bihlai: asked whether GSMA was considering the recommendations of NIST Post Quantum Competition in preparing the roadmap to adoption of Post Quantum Cryptography in its task force.

ORANGE we need chipmakers and manufacturers to participate in this task force (companies who are not GSMA members can be invited). Todor suggested to send them info on the SA3 study in the 256 bit-study.

ORANGE clarified that the roadmap of algorithms from different organizations like NIST would be the first step as an overview of the quantum computing work.

Apple:TR 33.801 has no information on the Quantum algorithms yet. Will the GSMA impact the work in SA3?

Vodafone: we have made progress since that TR. There is a collection of things that we can send them with a LS, including SAGE's work on 256-bit algorithms.

ORANGE: GSMA cannot change 3GPP's work, the decisions are taken here.

OPPO: what input from UE vendors? ORANGE replied that an assesment needed to be done on the impact on the devices by the UE vendors.

MCC commented that the TR was 3GPP internal only and it was important to clarify this to GSMA.ORANGE agreed and commented that GSMA had seen the TR already as it was a public document,

MCC commented that it had to be pointed out very carefully that the internal TR was only for information and nothing can be considered normative in them.

Apple: no necessary to reply, everything is public already.There are no questions for us. Apple objected to this LS.

NCSC: this information is useful for them.

**Decision:** The document was **noted**.

**S3-223916 Reply to: LS to inform about the new GSMA Task Force**

*Type: LS out For: approval  
 to GSMA  
 Source: ORANGE*

**Decision:** The document was **noted**.

**S3-223902 Specification of the 256-bit air interface algorithms**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: ETSI SAGE*

**Discussion:**

KDDI was happy to trigger a Study Item based on this work.

IDEMIA: SA3's prefreence is AES rather than Rijvendel. Let’s ask SAGE to publish the details on AES as well.

MCC commented that ETSI needed to investigate how to share the work of SAGE as it was not clear whether this needed to be confidential. A registration with the French anuthorities needed to be done most likely as well, as ETSI would be the host of the algorithms. In the meantime a SID or a WID could be started in SA3 to use SAGE's output.

Apple: companies need to study this information internally. We need more time.

**Decision:** The document was **postponed**.

## 4 Work areas (Rel-18)

### 4.1 New WID on Security Assurance Specification for Management Function (MnF)

**S3-223533 Editorial changes to the living document for MnF SCAS**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224121**.

**S3-224121 Editorial changes to the living document for MnF SCAS**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

(Replaces S3-223533)

**Decision:** The document was **approved**.

**S3-223541 Updates to clause 4.2 of MnF SCAS**

*Type: pCR For: Approval  
 33.526 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-223567 Living document for MnF SCAS**

*Type: draftCR For: Approval  
 33.926 v17.5.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224122**.

**S3-224122 Living document for MnF SCAS**

*Type: draftCR For: Approval  
 33.926 v17.5.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223567)

**Decision:** The document was **approved**.

**S3-223571 Updates to clause 4.3 of MnF SCAS**

*Type: pCR For: Approval  
 33.526 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224123**.

**S3-224123 Updates to clause 4.3 of MnF SCAS**

*Type: pCR For: Approval  
 33.526 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223571)

**Decision:** The document was **approved**.

**S3-224163 Draft TS 33.526**

*Type: draft TS For: Approval  
 33.526 v0.4.0  
 Source: Huawei*

**Decision:** The document was **approved**.

### 4.2 New WID on SECAM and SCAS for 3GPP virtualized network products

**S3-223458 Adding description about overview of vendor development and product lifecycle processes and test laboratory accreditation to clause 6.1**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224080**.

**S3-224080 Adding description about overview of vendor development and product lifecycle processes and test laboratory accreditation to clause 6.1**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223458)

**Decision:** The document was **approved**.

**S3-223459 Adding description about audit and accreditation of vendor development and product lifecycle processes to clause 6.2**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224081**.

**S3-224081 Adding description about audit and accreditation of vendor development and product lifecycle processes to clause 6.2**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223459)

**Decision:** The document was **approved**.

**S3-223460 Adding description about Audit and accreditation of test laboratories to clause 6.3**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224082**.

**S3-224082 Adding description about Audit and accreditation of test laboratories to clause 6.3**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223460)

**Decision:** The document was **approved**.

**S3-223461 Adding description about monitoring to clause 6.4**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-223553 Adding description about SCAS instantiation documents creation to clause 7.1**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-223554 Adding description about network product development process and network product lifecycle management to clause 7.2**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-223555 Adding description about SCAS instantiation evaluation overview to clause 7.2**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-223556 Adding description about content and process of SCAS instantiation evaluation to clause 7.2**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224083**.

**S3-224083 Adding description about content and process of SCAS instantiation evaluation to clause 7.2**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223556)

**Decision:** The document was **approved**.

**S3-223564 Adding description about testing to clause 7.2**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-223572 Adding description about self-declaration to clause 7.3**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-223575 Adding contents into clause 7.5 and 7.6**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-223632 Adding description about partial compliance and use of SECAM requirements in network product development cycle to clause 7.4**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224084**.

**S3-224084 Adding description about partial compliance and use of SECAM requirements in network product development cycle to clause 7.4**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223632)

**Decision:** The document was **approved**.

**S3-223633 Adding missing content from last implementation**

*Type: pCR For: Approval  
 33.936 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-223634 Adding clause 4.4 in TR 33.927**

*Type: pCR For: Approval  
 33.927 v0.2.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224085**.

**S3-224085 Adding clause 4.4 in TR 33.927**

*Type: pCR For: Approval  
 33.927 v0.2.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223634)

**Decision:** The document was **approved**.

**S3-223637 Adding clause 5 Generic assets and threats in TR 33.927**

*Type: pCR For: Approval  
 33.927 v0.2.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-223640 Adding clause 6 in TR 33.927**

*Type: pCR For: Approval  
 33.927 v0.2.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224086**.

**S3-224086 Adding clause 6 in TR 33.927**

*Type: pCR For: Approval  
 33.927 v0.2.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223640)

**Decision:** The document was **approved**.

**S3-223642 Proposal to add 4.1 in TS33.527**

*Type: pCR For: Approval  
 33.527 v0.1.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **noted**.

**S3-224096 Draft TR 33.936**

*Type: draft TR For: Approval  
 33.936 v0.4.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

**S3-224097 Draft TR 33.927**

*Type: draft TR For: Approval  
 33.927 v0.3.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

### 4.3 New WID on Mission critical security enhancements phase 3

**S3-223186 [33.180] R18 MC client clarification**

*Type: CR For: Agreement  
 33.180 v17.7.0 CR-0195 Cat: F (Rel-18)  
  
 Source: Motorola Solutions Danmark A/S*

**Abstract:**

Add clarification for MC Gateway UEs, relays, and non-3GPP MC UEs

**Decision:** The document was **withdrawn**.

### 4.4 New WID on Security Assurance Specification (SCAS) for 5G Rel-17 Features

**S3-223933 Adding non-Uu user plane text cases to TS 33.511**

*Type: draftCR For: Agreement  
 33.511 v17.2..0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **approved**.

**S3-223206 Clarification for IPSec in UPF interfaces**

*Type: CR For: Approval  
 33.513 v17.0.0 CR-0008 Cat: F (Rel-17)  
  
 Source: Keysight Technologies UK Ltd*

**Abstract:**

TS 33.501 – clause 9.3 specifies the UPF could support IPSec on its N3 interface or not. In case IPSec is not supported, a SEG may be used to terminate the IPSec tunnel.

Also, in TS 33.501 – clause 9.9, the specification defines that a SEG may be used to

**Decision:** The document was **not pursued**.

**S3-224089 Clarification for IPSec in UPF interfaces**

*Type: draftCR For: Approval  
 33.513 v17.0.0  
 Source: Keysight Technologies UK Ltd*

**Decision:** The document was **approved**.

**S3-223207 Correction of requirement references in UPF test case**

*Type: CR For: Approval  
 33.513 v17.0.0 CR-0009 Cat: F (Rel-17)  
  
 Source: Keysight Technologies UK Ltd*

**Abstract:**

Requirement reference in the test case is not correct

**Decision:** The document was **agreed**.

**S3-223208 Update gNB test case for UP integrity protection**

*Type: CR For: Approval  
 33.511 v17.2.0 CR-0033 Cat: F (Rel-17)  
  
 Source: Keysight Technologies UK Ltd*

**Abstract:**

Update the test case to the new specifications for Rel-17. Replay attack is covered in clause 4.2.2.1.8, then, not need to add to this modification. This test case applies to NSA and SA modes, which is why the “NOTE” is removed.

**Decision:** The document was **not pursued**.

**S3-223493 New Test Case on UP IP policy selection in S1 Handover**

*Type: other For: Approval  
 33.216 v..  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-223494 New Threat on Bidding down prevention for UP IP Policy**

*Type: other For: Approval  
 33.926 v..  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-223495 New Test Case on Bidding down prevention for UP IP Policy**

*Type: other For: Approval  
 33.216 v..  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-223506 living doc to TR33.926**

*Type: draftCR For: Approval  
 33.926 v17.5.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224155**.

**S3-224155 living doc to TR33.926**

*Type: draftCR For: Approval  
 33.926 v17.5.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223506)

**Decision:** The document was **approved**.

**S3-223507 living doc to TR33.216**

*Type: draftCR For: Approval  
 33.216 v16.7.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224156**.

**S3-224156 living doc to TR33.216**

*Type: draftCR For: Approval  
 33.216 v16.7.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223507)

**Decision:** The document was **approved**.

**S3-223508 living doc to TS33.117**

*Type: draftCR For: Approval  
 33.117 v17.1.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-223509 Update requirement and add new test case to clause 4.2.3.4.3.1**

*Type: draftCR For: Approval  
 33.117 v17.1.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223510 Update requirement and add new test case to clause 4.2.3.4.3.2**

*Type: draftCR For: Approval  
 33.117 v17.1.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223607 add test case to include SNPN snenario in PLMNID verification**

*Type: draftCR For: Approval  
 33.517 v17.0.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

### 4.5 New WID on Security Assurance Specification for the Authentication and Key Management for Applications (AKMA) Anchor Function Function (AAnF)

**S3-223205 New SCAS test case for AUSF**

*Type: draftCR For: Approval  
 33.516 v17.0.0  
 Source: Keysight Technologies UK Ltd*

**Abstract:**

Added new test case to cover the provision of Key material to AAnF from the AUSF. The requirement is defined in TS 33.535

**Decision:** The document was **noted**.

**S3-223422 Adding AKMA subscription and AKMA context asynchronization threats to TR 33.926**

*Type: draftCR For: Approval  
 33.926 v17.5.0  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-223423 Security Assurance Requirement and Test for AKMA subscription data and AKMA context synchronization**

*Type: pCR For: Approval  
 33.537 v0.2.0  
 Source: ZTE Corporation*

**Decision:** The document was **noted**.

**S3-223457 Adding a test case of AKMA key strorage and update**

*Type: pCR For: Approval  
 33.537 v0.2.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-223674 Adding AAnF critical assets and threats to TR 33.926**

*Type: draftCR For: Approval  
 33.926 v17.5.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **approved**.

**S3-224098 Draft TR 33.537**

*Type: draft TR For: Approval  
 33.537 v0.3.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

**S3-224135 Living document for AAnF SCAS – draftCR to TR 33.926**

*Type: draftCR For: Approval  
 33.926 v17.5.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

### 4.6 New WID on SCAS for split-gNB product classes

**S3-223342 Draft CR: Introducing split gNBs into TR 33.926**

*Type: draftCR For: Approval  
 33.926 v17.5.0  
 Source: Qualcomm Incoporated*

(Replaces S3-222322)

**Decision:** The document was **revised to S3-224169**.

**S3-224169 Draft CR: Introducing split gNBs into TR 33.926**

*Type: draftCR For: Approval  
 33.926 v17.5.0  
 Source: Qualcomm Incoporated*

(Replaces S3-223342)

**Decision:** The document was **approved**.

**S3-223343 Proposed text for gNB-CU part of draft CR to TR 33.926**

*Type: other For: Approval  
 Source: Qualcomm Incoporated*

(Replaces S3-221815)

**Decision:** The document was **approved**.

**S3-223344 Proposed text for gNB-CU-CP part of draft CR to TR 33.926**

*Type: other For: Approval  
 Source: Qualcomm Incoporated*

(Replaces S3-221816)

**Decision:** The document was **approved**.

**S3-223345 Add user plane threats for gNB-DU to the draft CR to TR 33.926**

*Type: other For: Approval  
 Source: Qualcomm Incoporated*

**Decision:** The document was **approved**.

**S3-223346 Correcting the threats references for the gNB-CU**

*Type: pCR For: Approval  
 33.742 v0.2.0  
 Source: Qualcomm Incoporated*

**Decision:** The document was **approved**.

**S3-223347 Adding user plane test cases for the gNB-CU**

*Type: pCR For: Approval  
 33.742 v0.2.0  
 Source: Qualcomm Incoporated*

**Decision:** The document was **noted**.

**S3-223348 Correcting the threats references for the gNB-CU-CP**

*Type: pCR For: Approval  
 33.742 v0.2.0  
 Source: Qualcomm Incoporated*

**Decision:** The document was **approved**.

**S3-223349 Adding test cases for the gNB-CU-CP**

*Type: pCR For: Approval  
 33.742 v0.2.0  
 Source: Qualcomm Incoporated*

**Decision:** The document was **approved**.

**S3-223350 Correcting the threats references for the gNB-CU-UP**

*Type: pCR For: Approval  
 33.742 v0.2.0  
 Source: Qualcomm Incoporated*

**Decision:** The document was **approved**.

**S3-223351 Adding test cases for the gNB-CU-UP**

*Type: pCR For: Approval  
 33.742 v0.2.0  
 Source: Qualcomm Incoporated*

**Decision:** The document was **noted**.

**S3-223352 Correcting the threats references for the gNB-DU**

*Type: pCR For: Approval  
 33.742 v0.2.0  
 Source: Qualcomm Incoporated*

**Decision:** The document was **approved**.

**S3-223353 Adding user plane test cases for the gNB-DU**

*Type: pCR For: Approval  
 33.742 v0.2.0  
 Source: Qualcomm Incoporated*

**Decision:** The document was **approved**.

**S3-223354 Adding non-501 test cases for the gNB-CU**

*Type: pCR For: Approval  
 33.742 v0.2.0  
 Source: Qualcomm Incoporated*

**Decision:** The document was **approved**.

**S3-224103 Draft TR 33.742**

*Type: draft TR For: Approval  
 33.742 v0.3.0  
 Source: Qualcomm*

**Decision:** The document was **approved**.

### 4.7 Service Based Architecture (Rel-15/16/17)

**S3-223203 Clarification on N32-f connection establishment with TLS**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1435 rev 1 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-221841)

**Decision:** The document was **revised to S3-223951**.

**S3-223951 Clarification on N32-f connection establishment with TLS**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1435 rev 2 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223203)

**Decision:** The document was **agreed**.

**S3-223260 Discussion on authorization issue in inter NF mobility**

*Type: discussion For: Information  
 33.501 v..  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223261 Clarification on authorization for inter NF mobility**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1484 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Ericsson: not needed. It can be done in CT3, CT4.

Mavenir: we support this CR. This doesn’t need a study.Not sure that the CR reflects the discussion paper.

The Chair asked if it was ageed that there was a problem here. Ericsson agreed but the question was for which group. Ericsson had an input for solving this issue in CT3,CT4.

**Decision:** The document was **not pursued**.

**S3-223404 Revise the pre-requisite of access token request**

*Type: CR For: (not specified)  
 33.501 v16.12.0 CR-1492 Cat: F (Rel-16)  
  
 Source: China Telecommunications*

**Decision:** The document was **agreed**.

**S3-223399 Revise the pre-requisite of access token request(mirror)**

*Type: CR For: (not specified)  
 33.501 v17.7.0 CR-1491 Cat: A (Rel-17)  
  
 Source: China Telecommunications*

**Decision:** The document was **agreed**.

**S3-223590 Discussion on notification URI disclosure in "Subscribe-Notify" scenarios**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Discussion:**

Huawei clarified that the issue can be solved by CT4 and identified by SA3.

Ericsson: there could be different solutions apart from this one and we would ike to discuss them in the next meeting.

**Decision:** The document was **noted**.

**S3-223591 LS on notification URI disclosure**

*Type: LS out For: Approval  
 to CT4  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223672 Editor's note resolution on NF instance id in cert profile**

*Type: CR For: (not specified)  
 33.310 v17.4.0 CR-0138 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Huawei: fine with the note, some rewording suggested.This had to be taken offline.

**Decision:** The document was **agreed**.

**S3-223677 Correct SCP certificate profile**

*Type: CR For: Agreement  
 33.310 v16.11.0 CR-0139 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **agreed**.

**S3-223678 Correct SCP certificate profile**

*Type: CR For: Agreement  
 33.310 v17.4.0 CR-0140 Cat: A (Rel-17)  
  
 Source: Ericsson*

**Decision:** The document was **agreed**.

**S3-223679 Clarify SEPP intra-domain certificate profile**

*Type: CR For: Agreement  
 33.310 v16.11.0 CR-0141 Cat: F (Rel-16)  
  
 Source: Ericsson, Nokia, Nokia Shanghai Bell*

**Discussion:**

CableLAbs: roaming interface?

Ericsson: to be done later.

**Decision:** The document was **agreed**.

**S3-223680 Clarify SEPP intra-domain certificate profile**

*Type: CR For: Agreement  
 33.310 v17.4.0 CR-0142 Cat: A (Rel-17)  
  
 Source: Ericsson, Nokia, Nokia Shanghai Bell*

**Decision:** The document was **agreed**.

**S3-223681 Correct NF certificate profile**

*Type: CR For: Agreement  
 33.310 v17.4.0 CR-0143 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Decision:** The document was **agreed**.

**S3-223682 SEPP to include and verify the source PLMN-ID**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1503 Cat: F (Rel-17)  
  
 Source: Ericsson, Mavenir, Nokia, Nokia Shanghai Bell*

(Replaces S3-221998)

**Discussion:**

Huawei didn’t agree with the first paragraph.

Mavenir: CT4 approved this already.We have to include the PLMN id, this has arrived in GSMA.

Huawei still had concerns despite that.

Ericsson: this is coming from an approved draft CR.It should not be taken back.

NTT-Docomo: The deployment limitations are not detailed. They should be added here. Maybe with an editor's note.

Mavenir: GSMA is already using this information based on CT4, not SA3.

**Decision:** The document was **revised to S3-223953**.

**S3-223953 SEPP to include and verify the source PLMN-ID**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1503 rev 1 Cat: F (Rel-17)  
  
 Source: Ericsson, Mavenir, Nokia, Nokia Shanghai Bell*

(Replaces S3-223682)

**Decision:** The document was **not pursued**.

**S3-223683 SEPP to include and verify the source PLMN-ID**

*Type: draftCR For: Approval  
 33.501 v17.7.0  
 Source: Ericsson, Nokia, Nokia Shanghai Bell, Mavenir*

(Replaces S3-221998)

**Discussion:**

MCC clarified that this was already approved in a previous meeting, so it wasn’t necessary to resubmit it unless there were changes. It could be noted but it had to be taken into account that the content was approved before already.

**Decision:** The document was **noted**.

**S3-223684 Clarification on access token requests for NF Producers of a specific NF type and token-based authorization for indirect communication with delegated discovery**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1504 Cat: B (Rel-18)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-223954**.

**S3-223954 Clarification on access token requests for NF Producers of a specific NF type and token-based authorization for indirect communication with delegated discovery**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1504 rev 1 Cat: B (Rel-18)  
  
 Source: Ericsson*

(Replaces S3-223684)

**Decision:** The document was **not pursued**.

**S3-223709 TargetNFServiceSetId to be part of access token claims**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1434 rev 1 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-221840)

**Discussion:**

Nokia: brought back because people thought this was a new feature when it is an alignment instead.

Ericsson: changes are on the wrong clause.

Huawei had issues with caoturing Service Set in the token.

This had to be taken offline.

**Decision:** The document was **revised to S3-223955**.

**S3-223955 TargetNFServiceSetId to be part of access token claims**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1434 rev 2 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223709)

**Decision:** The document was **agreed**.

**S3-223398 Revise the pre-requisite of access token request**

*Type: CR For: (not specified)  
 33.501 v16.12.0 CR-1490 Cat: F (Rel-16)  
  
 Source: China Telecommunications*

**Decision:** The document was **withdrawn**.

**S3-223825 Clarification on N32-f connection establishment with TLS - SNPN use case**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1435 rev 3 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-221841)

**Decision:** The document was **withdrawn**.

### 4.8 Security Aspects of Proximity based services in 5GS ProSe (Rel-17)

**S3-223409 Figure CR in 6.3.3.3.2 of TS33.503**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0047 Cat: F (Rel-17)  
  
 Source: China Telecom Corporation Ltd.,CATT*

**Decision:** The document was **merged**.

**S3-223552 Update to UE-to-Network relay security procedures**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0055 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223703 Renaming 5GPRUK, 5GPRUK ID, PRUK and PRUK ID**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0059 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-223956**.

**S3-223956 Renaming 5GPRUK, 5GPRUK ID, PRUK and PRUK ID**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0059 rev 1 Cat: F (Rel-17)  
  
 Source: Ericsson,China Telecom, Huawei, HiSilicon,CATT*

(Replaces S3-223703)

**Decision:** The document was **agreed**.

**S3-223368 Corrections in privacy protection of 5G ProSe UE-to-Network relay procedure**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0046 Cat: F (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-223957**.

**S3-223957 Corrections in privacy protection of 5G ProSe UE-to-Network relay procedure**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0046 rev 1 Cat: F (Rel-17)  
  
 Source: Qualcomm Incorporated,eijing Xiaomi Mobile Software*

(Replaces S3-223368)

**Decision:** The document was **agreed**.

**S3-223772 Correction to privacy protection of UP-PRUK ID and RSC in DCR**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0067 Cat: F (Rel-17)  
  
 Source: Beijing Xiaomi Mobile Software*

**Decision:** The document was **merged**.

**S3-223463 Clarifies to the match report procedures under UE-to-Network relay scenario**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0054 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223743 Match Report in U2N Relay Discovery Security Procedure**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0064 Cat: F (Rel-17)  
  
 Source: Xiaomi Technology*

**Decision:** The document was **revised to S3-223958**.

**S3-223958 Match Report in U2N Relay Discovery Security Procedure**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0064 rev 1 Cat: F (Rel-17)  
  
 Source: Xiaomi Technology,Huawei, HiSilicon*

(Replaces S3-223743)

**Decision:** The document was **agreed**.

**S3-223427 Add a Note to address the subscription synchronization between PAnF and UDM**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0048 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Discussion:**

Ericsson preferred this option to make it implementation dependent.

Supported by Nokia.

**Decision:** The document was **not pursued**.

**S3-223429 Clarification of subscription information in PAnF**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0050 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Discussion:**

MCC commented that the reference to TS23.501 was missing.

This was revised to address Huawei comments.

**Decision:** The document was **revised to S3-223960**.

**S3-223960 Clarification of subscription information in PAnF**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0050 rev 1 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

(Replaces S3-223429)

**Decision:** The document was **agreed**.

**S3-223573 CR on Remote UE Authorization check before using 5GPRUK generate KNR\_ProSe**

*Type: CR For: (not specified)  
 33.503 v17.1.0 CR-0056 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

Interdigital: we don’t see the need of this new interface, we prefer the ZTE version in 429 where an existing interface is impacted.

Ericsson didn’t support this CR.

**Decision:** The document was **not pursued**.

**S3-223428 Add functionality description of PAnF**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0049 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-223961**.

**S3-223961 Add functionality description of PAnF**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0049 rev 1 Cat: F (Rel-17)  
  
 Source: ZTE Corporation,CATT*

(Replaces S3-223428)

**Decision:** The document was **agreed**.

**S3-223671 CR to TS33.503 PAnF definition and reference point to UDM**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0057 Cat: F (Rel-17)  
  
 Source: CATT*

**Discussion:**

Depedent on 671.

**Decision:** The document was **merged**.

**S3-223430 Add FC Value in 33.503**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0051 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision:** The document was **agreed**.

**S3-223705 Nudm servcie operation correction**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0061 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-223962**.

**S3-223962 Nudm servcie operation correction**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0061 rev 1 Cat: F (Rel-17)  
  
 Source: Ericsson*

(Replaces S3-223705)

**Decision:** The document was **not pursued**.

**S3-223822 Discussion on RID used in ProSe**

*Type: discussion For: Endorsement  
 33.503 v..  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Interdigitak: there is no routing id for PAnF.

Huawei disagreed to have separate IDs.

Ericsson agreed with Huawei and Interdigital. ZTE as well.

**Decision:** The document was **noted**.

**S3-223823 include RID of AUSF in DCR**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0070 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not pursued**.

**S3-223824 include RID of AUSF in CP PRUK ID**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0071 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not pursued**.

**S3-223819 Discussion on Serving Network Name used in ProSe**

*Type: discussion For: Endorsement  
 33.503 v..  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223820 use relay UE SNN to generate AV for ProSe authentication**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0068 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not pursued**.

**S3-223821 use remote UE SNN to generate AV for ProSe authentication**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0069 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not pursued**.

**S3-223316 Handling of PRUK desynchronization issue with 5G ProSe UE-to-Network Relay**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0043 Cat: F (Rel-17)  
  
 Source: InterDigital, Europe, Ltd.*

**Discussion:**

Qualcomm: this is better handled in CT1.

Interdigital: there is a security issue that we can handle.

**Decision:** The document was **agreed**.

**S3-223462 Clarifies to clause 6.3.5 to include the CP mechanism key identifier**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0053 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223702 Correction to authentication mechanism selection**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0058 Cat: F (Rel-17)  
  
 Source: Ericsson, Xiaomi*

**Decision:** The document was **revised to S3-224161**.

**S3-224161 Correction to authentication mechanism selection**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0058 rev 1 Cat: F (Rel-17)  
  
 Source: Ericsson, Xiaomi*

(Replaces S3-223702)

**Decision:** The document was **agreed**.

**S3-223704 Correcting the handling of synchronisation error**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0060 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Discussion:**

Qualcomm: no need to update the existing text.The problem is addressed already.

**Decision:** The document was **revised to S3-224133**.

**S3-224133 Correcting the handling of synchronisation error**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0060 rev 1 Cat: F (Rel-17)  
  
 Source: Ericsson*

(Replaces S3-223704)

**Decision:** The document was **agreed**.

**S3-223706 CP-PRUK refresh**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0062 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Decision:** The document was **agreed**.

**S3-223742 DDNFM Selection during U2N Relay Discovery Security Procedure**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0063 Cat: F (Rel-17)  
  
 Source: Xiaomi Technology, Ericsson*

**Discussion:**

Interdigital had several issues, including some that may be under SA2's scope. This was taken offline.

**Decision:** The document was **not pursued**.

**S3-223744 Security Method Check during U2N Relay Discovery Procedure**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0065 Cat: F (Rel-17)  
  
 Source: Xiaomi Technology*

**Decision:** The document was **not pursued**.

**S3-223745 Updates to Key Definitions**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0066 Cat: F (Rel-17)  
  
 Source: Xiaomi Technology*

**Discussion:**

Qualcomm couldn’t agree with these changes.

Interdigital couldn’t agree either.

**Decision:** The document was **not pursued**.

**S3-223315 Alignment of Link Identifier Update (LIU) procedure**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0042 Cat: F (Rel-17)  
  
 Source: InterDigital, Europe, Ltd.*

**Discussion:**

Qualcomm: this is not missing in the existent specification. It is already covered.

Interdiigta didn’t agree, the spec wasn't referring to the privacy related procedure.

Qualcomm needed to check the spec.

ZTE: this is existent in SA2 but not in SA3. Just one line referring to SA2.

Interdigital: the SA2 refers to us, it creates a loop.

**Decision:** The document was **revised to S3-224170**.

**S3-224170 Alignment of Link Identifier Update (LIU) procedure**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0042 rev 1 Cat: F (Rel-17)  
  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-223315)

**Decision:** The document was **agreed**.

**S3-223318 Resolution of Remote UE permanent identity in Remote UE Report procedure (CP)**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0044 Cat: F (Rel-17)  
  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **not treated**.

**S3-223319 Resolution of Remote UE permanent identity in Remote UE Report procedure (UP)**

*Type: CR For: Agreement  
 33.503 v17.1.0 CR-0045 Cat: F (Rel-17)  
  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **not treated**.

**S3-223320 Discussion on Lawful Interception support for 5G ProSe Layer-3 UE-to-Network Relay**

*Type: discussion For: Endorsement  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **not treated**.

**S3-223321 LS on support for Lawful Intercept target identities for 5G ProSe Remote UE**

*Type: LS out For: Approval  
 to SA3-LI, SA2, cc CT1, CT4  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **not treated**.

**S3-223367 LS on Source user info in Direct Communication Request in UE-to-Network Relay**

*Type: LS out For: Approval  
 to SA2, CT1  
 Source: Qualcomm Incorporated*

**Discussion:**

Interdigital: too late for Rel-17.

Huawei disagreed with this LS.

**Decision:** The document was **noted**.

**S3-223431 Allocate FC Value for 33.503**

*Type: CR For: Approval  
 33.503 v17.1.0 CR-0052 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision:** The document was **withdrawn**.

**S3-223557 Allocate FC Value for 33.503**

*Type: CR For: Approval  
 33.220 v17.3.0 CR-0219 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-224171**.

**S3-224171 Allocate FC Value for 33.503**

*Type: CR For: Approval  
 33.220 v17.3.0 CR-0219 rev 1 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

(Replaces S3-223557)

**Decision:** The document was **agreed**.

### 4.9 All topics (Rel-15/16/17/18 )

**S3-223164 Reply LS on Security architecture for 5G multicast/broadcast services**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2207390*

**Decision:** The document was **replied to in S3-223919**.

**S3-223172 Reply LS on the impact of MSK update on MBS multicast session update procedure**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2209287*

**Decision:** The document was **postponed**.

**S3-223527 CR on control-plane procedure in MBS**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1499 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

Qualcomm agreed with this proposal but had some minor wording comments.

MCC: number the Notes.

**Decision:** The document was **revised to S3-223917**.

**S3-223917 CR on control-plane procedure in MBS**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1499 rev 1 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

(Replaces S3-223527)

**Decision:** The document was **not pursued**.

**S3-223528 Reply LS on the impact of MSK update on MBS multicast session update procedure**

*Type: LS out For: Approval  
 to SA2, cc SA4, CT1, CT4  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223918**.

**S3-223918 Reply LS on the impact of MSK update on MBS multicast session update procedure**

*Type: LS out For: Approval  
 to SA2, cc SA4, CT1, CT4  
 Source: Huawei, HiSilicon*

(Replaces S3-223528)

**Decision:** The document was **noted**.

**S3-223365 Clarification on 5G MBS user-plane procedure**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1489 Cat: F (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **merged**.

**S3-223529 CR on authentication in user plane procedure in MBS**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1500 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223920**.

**S3-223920 CR on authentication in user plane procedure in MBS**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1500 rev 1 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon,Qualcomm*

(Replaces S3-223529)

**Decision:** The document was **agreed**.

**S3-223366 Reply LS on Security architecture for 5G multicast/broadcast services**

*Type: LS out For: Approval  
 to SA2, cc SA4  
 Source: Qualcomm Incorporated*

**Decision:** The document was **merged**.

**S3-223530 Reply LS on Security architecture for 5G multicast/broadcast services**

*Type: LS out For: Approval  
 to SA2, cc SA4  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223919**.

**S3-223919 Reply LS on Security architecture for 5G multicast/broadcast services**

*Type: LS out For: Approval  
 to SA2, cc SA4  
 Source: Huawei, HiSilicon*

(Replaces S3-223530)

**Decision:** The document was **approved**.

**S3-223266 AKMA API enhancement based on the LS**

*Type: CR For: Agreement  
 33.535 v17.7.0 CR-0139 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Qualcomm: SA3 decided to have the separate service for security isolation purposes.

Docomo: separate APIs makes sense.

**Decision:** The document was **not pursued**.

**S3-223265 LS reply on AKMA API**

*Type: LS out For: Approval  
 to CT3  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-223921**.

**S3-223921 LS reply on AKMA API**

*Type: LS out For: Approval  
 to CT3  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223265)

**Decision:** The document was **approved**.

**S3-223424 Add Context\_Remove into table 7.1.1-1**

*Type: CR For: Approval  
 33.535 v17.7.0 CR-0140 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Discussion:**

Ericsson: is this FASMO? Isn’t this OAM?

ZTE: we are open to discuss the relationship with OAM.

Huawei: this is not needed.Services to be consumed by MnF are not up to SA3.

ZTE: this is not a new service; it was missing in the table.

**Decision:** The document was **not pursued**.

**S3-223425 Add MnF in clause 6.6.1and 6.7**

*Type: CR For: Approval  
 33.535 v17.7.0 CR-0141 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Discussion:**

Dependent on the previous CR.

**Decision:** The document was **not pursued**.

**S3-223426 Add one note about AKMA subscription data and AKMA context asynchronization in clause 6.6.1**

*Type: CR For: Approval  
 33.535 v17.7.0 CR-0142 Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Discussion:**

Nokia: I agree with the issue. This is also related with the OAM question on the previous CRs.

Huawei: the note seems to be a strict requirement, not appropriate.

**Decision:** The document was **not pursued**.

**S3-223711 AAnF sending GPSI to internal AKMA AF**

*Type: CR For: Approval  
 33.535 v17.7.0 CR-0143 Cat: F (Rel-17)  
  
 Source: China Mobile (Suzhou) Software*

**Discussion:**

Nokia: no need to introduce this conversion at the AAnF.

Qualcomm: we discussed this for long and it has been raised by Qualcomm. Some operators already said that they don’t want to provide the SUPI for security reasons.It can be a compromise to add this in Release 18 instead of Rel-17. This is needed as AKMA cannot be used in many services.

China Mobile: This should be a service requirement.

Verizon (remotely) supported China Mobile and Qualcomm.

Huawei supported this; it was needed.

Nokia: this is one more layer of trust. This will open other security issues.

**Decision:** The document was **not pursued**.

**S3-223831 KAF lifetime recommendations and Ua\* protocol requirements**

*Type: CR For: Agreement  
 33.535 v17.7.0 CR-0144 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Discussion:**

Lenovo: nor pursued, as this is studied in Rel-18 already.

Qualcomm: this clarification is welcome.

OPPO: we don’t support this because there is a study in Rel-18 already.

Huawei: this requires reformulation.

Samsung: we see multiple issues with maximizing the lifetime of KAF.

Lenovo: conclude the issue in Rel-18 and bring this CR back.

**Decision:** The document was **not pursued**.

**S3-223646 Rel-15 Correcting the OAuth 2.0 roles in CAPIF**

*Type: CR For: Agreement  
 33.122 v15.3.0 CR-0031 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Discussion:**

Huawei: remove first sentence.

Nokia needed some offline discussion for this as well.

**Decision:** The document was **revised to S3-223922**.

**S3-223922 Rel-15 Correcting the OAuth 2.0 roles in CAPIF**

*Type: CR For: Agreement  
 33.122 v15.3.0 CR-0031 rev 1 Cat: F (Rel-15)  
  
 Source: Ericsson*

(Replaces S3-223646)

**Decision:** The document was **agreed**.

**S3-223647 Rel-16 Correcting the OAuth 2.0 roles in CAPIF**

*Type: CR For: Agreement  
 33.122 v16.3.0 CR-0032 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-223923**.

**S3-223923 Rel-16 Correcting the OAuth 2.0 roles in CAPIF**

*Type: CR For: Agreement  
 33.122 v16.3.0 CR-0032 rev 1 Cat: A (Rel-16)  
  
 Source: Ericsson*

(Replaces S3-223647)

**Decision:** The document was **agreed**.

**S3-223648 Rel-17 Correcting the OAuth 2.0 roles in CAPIF**

*Type: CR For: Agreement  
 33.122 v17.0.0 CR-0033 Cat: A (Rel-17)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-223924**.

**S3-223924 Rel-17 Correcting the OAuth 2.0 roles in CAPIF**

*Type: CR For: Agreement  
 33.122 v17.0.0 CR-0033 rev 1 Cat: A (Rel-17)  
  
 Source: Ericsson*

(Replaces S3-223648)

**Decision:** The document was **agreed**.

**S3-223619 CR on AES-GCM/GMAC in IMS SIP security**

*Type: CR For: Approval  
 33.203 v17.1.0 CR-0266 Cat: C (Rel-17)  
  
 Source: Apple*

**Discussion:**

Qualcomm: not convinved that in this use case there are multiple IP tunnels, so there are no issues here.

**Decision:** The document was **revised to S3-223925**.

**S3-223925 CR on AES-GCM/GMAC in IMS SIP security**

*Type: CR For: Approval  
 33.203 v17.1.0 CR-0266 rev 1 Cat: C (Rel-17)  
  
 Source: Apple*

(Replaces S3-223619)

**Discussion:**

Revised due to file not being able to be opened.

**Decision:** The document was **not pursued**.

**S3-223588 Addressing authentication and authorization for EDGE-9**

*Type: CR For: Approval  
 33.558 v17.2.0 CR-0008 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **agreed**.

**S3-223650 Correction and clarification in user consent requirements**

*Type: CR For: Agreement  
 33.558 v17.2.0 CR-0009 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Discussion:**

Huawei didn’t agree with the removal of the sentence. Let the operator decide.

Nokia: let's not use stage 3 arguments here.

Huawei: we will cause misalignment if we remove the requirement.

**Decision:** The document was **not pursued**.

**S3-223777 CR\_33.501 R17 Remove the redundant part of Figure I.2.3.2-1**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1512 Cat: F (Rel-17)  
  
 Source: Xiaomi Communication*

**Decision:** The document was **agreed**.

**S3-223781 CR\_33.501 R17 Update step 15 of clause I.2.2.2.1**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1516 Cat: F (Rel-17)  
  
 Source: Xiaomi Communication*

**Decision:** The document was **agreed**.

**S3-223845 Clarification on AF authorization for the NSACF notification procedure**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1522 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Decision:** The document was **revised to S3-223926**.

**S3-223926 Clarification on AF authorization for the NSACF notification procedure**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1522 rev 1 Cat: F (Rel-17)  
  
 Source: Ericsson*

(Replaces S3-223845)

**Decision:** The document was **not pursued**.

**S3-223846 Alignment of NSACF notification procedure with existing procedures**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1523 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Decision:** The document was **not pursued**.

**S3-223860 Verification of NSSAIs for preventing slice attack**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1525 Cat: B (Rel-18)  
  
 Source: CableLabs, Ericsson, Nokia, Nokia Shanghai Bell*

**Discussion:**

Huawei: the SBA study has this key issue for Rel-18, although this was presented in Rel-16 and Rel-17 already.

Nokia: the WID associated is coming for this meeting.

Mavenir: why cat-F?

Nokia: it's addressing a vulnerability.

It was commented that since there was an associated WID this could be cat-B.

Verizon supported this CR.

Conditionally agreed depending on the status of the WID for this meeting.

**Decision:** The document was **agreed**.

**S3-223332 Resolving the EN on CAA level ID during UUAA procedures**

*Type: CR For: Agreement  
 33.256 v17.1.0 CR-0009 rev 2 Cat: F (Rel-17)  
  
 Source: Qualcomm Incorporated*

(Replaces S3-221827)

**Discussion:**

Lenovo preferred not to pursue this document.

Interdigital: step 7 is OK.

Qualcomm: just turning the editor's note into a note.

**Decision:** The document was **not pursued**.

**S3-223927 Resolving the EN on CAA level ID during UUAA procedures**

*Type: CR For: Agreement  
 33.256 v17.1.0 CR-0009 rev 3 Cat: F (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **withdrawn**.

**S3-223333 Resolving the ENs on CAA level ID during revocation**

*Type: CR For: Agreement  
 33.256 v17.1.0 CR-0011 rev 2 Cat: F (Rel-17)  
  
 Source: Qualcomm Incorporated*

(Replaces S3-221828)

**Discussion:**

Lenovo didn’t agree with this CR.

This was taken offline.

**Decision:** The document was **revised to S3-223928**.

**S3-223928 Resolving the ENs on CAA level ID during revocation**

*Type: CR For: Agreement  
 33.256 v17.1.0 CR-0011 rev 3 Cat: F (Rel-17)  
  
 Source: Qualcomm Incorporated*

(Replaces S3-223333)

**Decision:** The document was **agreed**.

**S3-223418 Address ENs in revocation procedures**

*Type: CR For: Agreement  
 33.256 v17.1.0 CR-0017 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

Lenovo had issues with this contribution as well.

**Decision:** The document was **merged**.

**S3-223419 Address ENs in UUAA procedures**

*Type: CR For: Agreement  
 33.256 v17.1.0 CR-0018 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223522 Editorial change on USS authorization**

*Type: CR For: Approval  
 33.256 v17.1.0 CR-0019 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **agreed**.

**S3-223889 [MCPTT] 33179 R13 Incorrect example**

*Type: CR For: Decision  
 33.179 v13.11.0 CR-0107 Cat: F (Rel-13)  
  
 Source: Airbus*

**Abstract:**

Incorrect example used for the scope of an access token. The scope of an access token should be a space-delimited list, but in the examples it uses an array.

**Decision:** The document was **revised to S3-223944**.

**S3-223944 [MCPTT] 33179 R13 Incorrect example**

*Type: CR For: Decision  
 33.179 v13.11.0 CR-0107 rev 1 Cat: F (Rel-13)  
  
 Source: Airbus*

(Replaces S3-223889)

**Decision:** The document was **revised to S3-224172**.

**S3-224172 [MCPTT] 33179 R13 Incorrect example**

*Type: CR For: Decision  
 33.179 v13.11.0 CR-0107 rev 2 Cat: F (Rel-13)  
  
 Source: Airbus*

(Replaces S3-223944)

**Decision:** The document was **agreed**.

**S3-223890 [MCSec] 33180 R14 Incorrect example**

*Type: CR For: Decision  
 33.180 v14.11.0 CR-0196 Cat: F (Rel-14)  
  
 Source: Airbus*

**Abstract:**

Incorrect example used for the scope of an access token. The scope of an access token should be a space-delimited list, but in the examples it uses an array.

**Decision:** The document was **agreed**.

**S3-223891 [eMCSec] Mirror 33180 R14 Incorrect example**

*Type: CR For: Decision  
 33.180 v15.12.0 CR-0197 Cat: A (Rel-15)  
  
 Source: Airbus*

**Abstract:**

Incorrect example used for the scope of an access token. The scope of an access token should be a space-delimited list, but in the examples it uses an array.

**Decision:** The document was **agreed**.

**S3-223892 [MCXSec] Mirror 33180 R14 Incorrect example**

*Type: CR For: Decision  
 33.180 v16.10.0 CR-0198 Cat: A (Rel-16)  
  
 Source: Airbus*

**Abstract:**

Incorrect example used for the scope of an access token. The scope of an access token should be a space-delimited list, but in the examples it uses an array.

**Decision:** The document was **agreed**.

**S3-223893 [MCXSec2] Mirror 33180 R14 Incorrect example**

*Type: CR For: Decision  
 33.180 v17.7.0 CR-0199 Cat: A (Rel-17)  
  
 Source: Airbus*

**Abstract:**

Incorrect example used for the scope of an access token. The scope of an access token should be a space-delimited list, but in the examples it uses an array.

**Decision:** The document was **agreed**.

**S3-223896 [MCPTT] 33179 R13 Incorrect reference**

*Type: CR For: Decision  
 33.179 v13.11.0 CR-0108 Cat: F (Rel-13)  
  
 Source: Airbus*

**Decision:** The document was **agreed**.

**S3-223897 [MCSec] 33180 R14 Incorrect reference**

*Type: CR For: Decision  
 33.180 v14.11.0 CR-0200 Cat: F (Rel-14)  
  
 Source: Airbus*

**Decision:** The document was **agreed**.

**S3-223898 [eMCSec] 33180 R15 Incorrect reference (Mirror)**

*Type: CR For: Decision  
 33.180 v15.12.0 CR-0201 Cat: A (Rel-15)  
  
 Source: Airbus*

**Decision:** The document was **agreed**.

**S3-223899 [MCXSec] 33180 R16 Incorrect reference (Mirror)**

*Type: CR For: Decision  
 33.180 v16.10.0 CR-0202 Cat: A (Rel-16)  
  
 Source: Airbus*

**Decision:** The document was **agreed**.

**S3-223900 [MCXSec2] 33180 R17 Incorrect reference (Mirror)**

*Type: CR For: Decision  
 33.180 v17.7.0 CR-0203 Cat: A (Rel-17)  
  
 Source: Airbus*

**Decision:** The document was **agreed**.

**S3-223187 Clarification of hashing**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0081 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Discussion:**

Mavenir: state of art non cryptographic?

BSI: not broken.

Mavenir: you need to use a standard term for that, it is ambiguous.

BT: this is a TS, we specify down to the last bits of the algorithm. Requirement is fine, link up to the appropriate NIST document in line with previous comments.

BSI: we can add the NIST document and cross check with a BSI guideline,

**Decision:** The document was **not pursued**.

**S3-223188 Clarification of authorization verification**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0082 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Discussion:**

Mavenir: this is adding authorization but it is not saying how to do it.

BT: the principle of adding it is fine.

**Decision:** The document was **not pursued**.

**S3-223189 Clarification of brute force mitigation mechanism verification**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0083 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Discussion:**

Huawei: change step 7. It is describing another condition, it shouldn’t be a new step. It should be a NOTE.

BT: the requirement makes it mandatory, but it looks like we are weakening the requirement with the note.

**Decision:** The document was **not pursued**.

**S3-223945 Clarification of brute force mitigation mechanism verification**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0083 rev 1 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Decision:** The document was **withdrawn**.

**S3-223190 Clarification of privilege escalation methods to check for**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0084 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Discussion:**

Huawei: what kind of used capabilities?

BSI: We can clarify that.

NTT\_Docomo: add how to check in the execution steps.

**Decision:** The document was **not pursued**.

**S3-223946 Clarification of privilege escalation methods to check for**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0084 rev 1 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Decision:** The document was **withdrawn**.

**S3-223191 Clarification of service reachability restriction verification**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0085 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Discussion:**

MCC: all these CRs have the wrong WID. It should be eSCAS\_5G.

Some changes in the text were proposed as well.

BT: there is a danger of adding requirements from the back door in the test cases. We need to discuss offline, whether the test cases are for existent requirements or defining new ones.

**Decision:** The document was **not pursued**.

**S3-223947 Clarification of service reachability restriction verification**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0085 rev 1 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Decision:** The document was **withdrawn**.

**S3-223192 Clarification of auto-launch verification**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0086 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Discussion:**

Huawei: remove the check in the RAN and Core Network field in the cover page.

Vodafone: "any kind of autostart file" is ambiguous.

BT: don’t replace any kind with "all". We should not forbid all kinds of autostart files as we need something for operational reasons. Maybe "unauthorised".

Vodafone: it depends on where you are in the operational process. BT meant when the service was not built, still fresh.

BSI: we need to discuss this internally.

**Decision:** The document was **not pursued**.

**S3-223193 Clarification of SYN Flood attack prevention test**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0087 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Discussion:**

Interdigital: format is not defined here.

Mavenir: are we making this use case vendor specific? On the first precondition.

BT had also issues with the execution steps.

**Decision:** The document was **not pursued**.

**S3-223194 Clarification of privilege verification**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0088 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Discussion:**

Huawei: it conflicts with the original purpose. We need to discuss offline.

**Decision:** The document was **not pursued**.

**S3-223197 Clarification of CGI/Scripting component directory check**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0089 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Discussion:**

Mavenir: about all these CRs. They are all for Release 17, which is frozen. These enhancements are good, but these are being used out there.We need time to check that these are expansions or new tests. If they are new they should go for Release 18, otherwise they are impacting on current implementations.

Huawei: these proposals could go to a draft CR in Release 18.

BT: from the ENISA perspective we may have to do these in Release 17 anyway, otherwise somebody else would take this task, Not keen on delaying to Release 18 just because they are difficult.

Mavenir: just one meeting cycle to make sure that these are added properly.

**Decision:** The document was **not pursued**.

**S3-223198 Clarification of SSI System Command Excecution test**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0090 Cat: F (Rel-17)  
  
 Source: BSI (DE)*

**Decision:** The document was **not pursued**.

**S3-223602 Clarification on TC\_ IP\_MULTICAST\_HANDLING**

*Type: CR For: Approval  
 33.117 v16.8.0 CR-0091 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **agreed**.

**S3-223603 Clarification on TC\_ IP\_MULTICAST\_HANDLING**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0092 Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **agreed**.

**S3-223604 Clarification on IP\_FWD\_DISABLING**

*Type: CR For: Approval  
 33.117 v16.8.0 CR-0093 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

Qualcomm: the note is referring to the removed sentence so it should be deleted as well.

**Decision:** The document was **revised to S3-223929**.

**S3-223929 Clarification on IP\_FWD\_DISABLING**

*Type: CR For: Approval  
 33.117 v16.8.0 CR-0093 rev 1 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

(Replaces S3-223604)

**Decision:** The document was **agreed**.

**S3-223605 Clarification on IP\_FWD\_DISABLING**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0094 Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223930**.

**S3-223930 Clarification on IP\_FWD\_DISABLING**

*Type: CR For: Approval  
 33.117 v17.1.0 CR-0094 rev 1 Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

(Replaces S3-223605)

**Decision:** The document was **agreed**.

**S3-223880 Remove password complexity criteria, password expiry and password history requirements**

*Type: CR For: Agreement  
 33.117 v16.8.0 CR-0095 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Update password requirements.

**Discussion:**

Huawei didn’t understand the change. Vodafone had the same question.

Ericsson: the tests were created years ago, the guidelines have been updated.

China Mobile: we don’t want this change, it would weaken the requirements.

NCSC: this doesn’t necessarily reduce the security, the length of the password is more important.

Jeff (NIST) agreed: longer passwords are more secure according to the studies.

Mavenir: the combination is also important (e.g. capital letters).

Docomo: list of non acceptable passwords would help. Make it harder to create memorable passwords.

**Decision:** The document was **revised to S3-223931**.

**S3-223931 Remove password complexity criteria, password expiry and password history requirements**

*Type: CR For: Agreement  
 33.117 v16.8.0 CR-0095 rev 1 Cat: F (Rel-16)  
  
 Source: Ericsson*

(Replaces S3-223880)

**Decision:** The document was **not pursued**.

**S3-223884 Remove password complexity criteria, password expiry and password history requirements**

*Type: CR For: Agreement  
 33.117 v17.1.0 CR-0096 Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Update password requirements

**Decision:** The document was **revised to S3-223932**.

**S3-223932 Remove password complexity criteria, password expiry and password history requirements**

*Type: CR For: Agreement  
 33.117 v17.1.0 CR-0096 rev 1 Cat: A (Rel-17)  
  
 Source: Ericsson*

(Replaces S3-223884)

**Decision:** The document was **not pursued**.

**S3-223336 Corrections to the test cases in TS 33.511**

*Type: CR For: Agreement  
 33.511 v16.8.0 CR-0034 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **agreed**.

**S3-223337 Corrections to the test cases in TS 33.511**

*Type: CR For: Agreement  
 33.511 v17.2.0 CR-0035 Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **agreed**.

**S3-223338 Corrections to the threat references in TS 33.511**

*Type: CR For: Agreement  
 33.511 v16.8.0 CR-0036 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **agreed**.

**S3-223339 Corrections to the threat references in TS 33.511**

*Type: CR For: Agreement  
 33.511 v17.2.0 CR-0037 Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **agreed**.

**S3-223340 Adding non-Uu user plane text cases to TS 33.511**

*Type: CR For: Agreement  
 33.511 v16.8.0 CR-0038 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

MCC commented that this should be Rel-18.

To be added to the draft CR for Rel-18 in tdoc 933.

**Decision:** The document was **not pursued**.

**S3-223341 Adding non-Uu user plane text cases to TS 33.511**

*Type: CR For: Agreement  
 33.511 v17.2.0 CR-0039 Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **not pursued**.

**S3-223334 Correction to the gNB threats in TR 33.926**

*Type: CR For: Agreement  
 33.926 v16.6.0 CR-0062 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

It needed to be taken offline for discussions with Lenovo.

**Decision:** The document was **agreed**.

**S3-223335 Correction to the gNB threats in TR 33.926**

*Type: CR For: Agreement  
 33.926 v17.5.0 CR-0063 Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **agreed**.

**S3-223582 Discussion on IMS SCAS status**

*Type: discussion For: Endorsement  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223583 LS on IMS SCAS to GSMA**

*Type: LS out For: Approval  
 to GSMA NESASG  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223934**.

**S3-223934 LS on IMS SCAS to GSMA**

*Type: LS out For: Approval  
 to GSMA NESASG  
 Source: Huawei, HiSilicon*

(Replaces S3-223583)

**Decision:** The document was **approved**.

**S3-223854 Authentication for UE behind 5G-RG and FN-RG using NSWO**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1524 Cat: F (Rel-17)  
  
 Source: CableLabs*

**Discussion:**

Ericsson: this is not a small correction but a major feature.

CableLabs: no new feature, no major impact here.

Qualcomm, AT&T: not a correction or alignment.

It was taken offline to check the SA2 spec.

**Decision:** The document was **not pursued**.

**S3-223835 Living document for DUMMY: draftCR to TS 33.535, IETF OSCORE as AKMA Ua\* protocol**

*Type: draftCR For: Approval  
 33.535 v17.7.0  
 Source: Ericsson, Deutsche Telekom*

**Discussion:**

Huawei: this depends on the agreement on the WID.

**Decision:** The document was **not pursued**.

**S3-223730 Living document for SERP: draftCR to TS 33.501 on the Protection of the RRC Resume Request message**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1506 Cat: C (Rel-18)  
  
 Source: Samsung*

**Decision:** The document was **not pursued**.

**S3-223847 Living document for SERP: draftCR to TS 33.501 on the Protection of the RRC Resume Request message**

*Type: draftCR For: Approval  
 33.501 v17.7.0  
 Source: Ericsson, Apple*

**Discussion:**

Quakcomm: there is a lot of contradicting text across the CR.

**Decision:** The document was **noted**.

**S3-223613 SERP - LS on security protection on RRCResumeRequest message**

*Type: LS out For: Approval  
 to RAN, RAN2, RAN3  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-223631 User consent clarification**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1502 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Discussion:**

Huawei: not needed.It's a legal statement, not appropriate for this specification.

NTT-Docomo:I don’t know the purpose of this.

Google: this defintion of user consent is too narrow.

Nokia supported the above companies.

Qualcomm: maybe useful to have a clarification, because this sounds confusing. Offline work could improve this.

Nokia: the first sentence already does the job.

BT: first and second change are incompatible. GDPR is data protection not privacy.

This was taken offline.

**Decision:** The document was **not pursued**.

**S3-223517 Discussion on Kiab handling in IAB migration**

*Type: discussion For: Approval  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223518 CR on Kiab handling in IAB migration\_new psk**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1497 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not pursued**.

**S3-223519 CR on Kiab handling in IAB migration\_old psk**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1498 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223950**.

**S3-223950 CR on Kiab handling in IAB migration\_old psk**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1498 rev 1 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

(Replaces S3-223519)

**Decision:** The document was **not pursued**.

**S3-223735 [IAB] IAB inter-CU topology adaptation procedure**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1507 Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision:** The document was **not pursued**.

**S3-223520 LS on Kiab handling in IAB migration**

*Type: LS out For: Approval  
 to RAN3, cc RAN2  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223773 CR\_33.501 R15 Update A.18 to define SoR-XMAC-IUE**

*Type: CR For: Approval  
 33.501 v15.16.0 CR-1508 Cat: F (Rel-15)  
  
 Source: Xiaomi Communication*

**Discussion:**

Ericsson: why Rel-15? It is better to start in Release 16.

The Chair commented that this wasn’t FASMO and MCC confirmed that if implementations were not affected below Rel-18 starting the change in Rel-18 was fine.

It was commented that it was better not to create a Rel-18 version of TS 33.501 for this so eventually the change was agreed for Rel-17.

Huawei: add missing reference.

**Decision:** The document was **not pursued**.

**S3-223775 CR\_33.501 R16 Update A.18 to define SoR-XMAC-IUE (mirror)**

*Type: CR For: Approval  
 33.501 v16.12.0 CR-1510 Cat: A (Rel-16)  
  
 Source: Xiaomi Communication*

**Decision:** The document was **not pursued**.

**S3-223779 CR\_33.501 R17 Update A.18 to define SoR-XMAC-IUE (mirror)**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1514 Cat: F (Rel-17)  
  
 Source: Xiaomi Communication*

**Decision:** The document was **revised to S3-223935**.

**S3-223935 CR\_33.501 R17 Update A.18 to define SoR-XMAC-IUE (mirror)**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1514 rev 1 Cat: F (Rel-17)  
  
 Source: Xiaomi Communication*

(Replaces S3-223779)

**Decision:** The document was **agreed**.

**S3-223778 CR\_33.501 R17 Update A.17 for SoR transparent container**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1513 Cat: F (Rel-17)  
  
 Source: Xiaomi Communication*

**Discussion:**

Docomo: it should be normative "shall" instead of "should" and don’t make it a note.

**Decision:** The document was **revised to S3-223936**.

**S3-223936 CR\_33.501 R17 Update A.17 for SoR transparent container**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1513 rev 1 Cat: F (Rel-17)  
  
 Source: Xiaomi Communication*

(Replaces S3-223778)

**Decision:** The document was **agreed**.

**S3-223774 CR\_33.501 R15 Update A.20 to define UPU-XMAC-IUE**

*Type: CR For: Approval  
 33.501 v15.16.0 CR-1509 Cat: D (Rel-15)  
  
 Source: Xiaomi Communication*

**Decision:** The document was **not pursued**.

**S3-223776 CR\_33.501 R16 Update A.20 to define UPU-XMAC-IUE (mirror)**

*Type: CR For: Approval  
 33.501 v16.12.0 CR-1511 Cat: D (Rel-16)  
  
 Source: Xiaomi Communication*

**Decision:** The document was **not pursued**.

**S3-223780 CR\_33.501 R17 Update A.20 to define UPU-XMAC-IUE (mirror)**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1515 Cat: F (Rel-17)  
  
 Source: Xiaomi Communication*

**Discussion:**

Huawei: reference missing here.

It was agreed to make the change only in Rel-17.

**Decision:** The document was **revised to S3-223937**.

**S3-223937 CR\_33.501 R17 Update A.20 to define UPU-XMAC-IUE (mirror)**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1515 rev 1 Cat: F (Rel-17)  
  
 Source: Xiaomi Communication*

(Replaces S3-223780)

**Decision:** The document was **agreed**.

**S3-223331 Clarification to the UPU procedures**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1488 Cat: F (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

Qualcomm: CT4 created a non backwards compatible change it will be treated next meeting.

**Decision:** The document was **not pursued**.

**S3-223262 Correction in UPU procedure to align with stage 3**

*Type: CR For: Agreement  
 33.501 v16.12.0 CR-1485 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Qualcomm: the UE cannot make the decision whether the network included the UDP header or not. Othe UDP header is ptional in one interface mandatory in other interfaces.

Huawei supports Qualcomm. The UE will always get the header.

This had to be taken offline.

**Decision:** The document was **not pursued**.

**S3-223263 Correction in UPU procedure to align with stage 3**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1486 Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not pursued**.

**S3-223264 UPU procedure align with stage 3 for AMF not registered case**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1487 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Qualcomm: the not should read "if step 1…".

NTT-Docomo: I don’t think this is a note, it is mandatory behaviour.

Huawei didn’t fully understand what it was needed but agreed that this should not be a note.

**Decision:** The document was **revised to S3-223938**.

**S3-223938 UPU procedure align with stage 3 for AMF not registered case**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1487 rev 1 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223264)

**Decision:** The document was **not pursued**.

**S3-223707 Clarification to multiple registrations in different PLMNs\access types**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1505 Cat: F (Rel-17)  
  
 Source: Ericsson*

**Discussion:**

Nokia didn’t agree with the wording.CT4 specs are clear.

NTT-Docomo: this should be specified somewhere else instead of putting a long text. Just refer to the place where it is written in CT4.

**Decision:** The document was **not pursued**.

**S3-223807 Discussion paper on restriction for multi registrations in two PLMNs**

*Type: discussion For: Endorsement  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

NO need to endorse, we discuss the CRs.

**Decision:** The document was **noted**.

**S3-223809 Add restriction for multi registrations in two PLMNs**

*Type: CR For: Agreement  
 33.501 v16.12.0 CR-1518 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Huawei: we don’t agree with the notes.

Qualcomm: we don’t agree with this CR. The problem is solved in the network not in the UE, and the change is not simple.

Huawei: we think it is a valid case but we miss a different network here. We are not sure how to solve this.

Ericsson: we are fine with the CRs.

BT: this is just a small piece of a bigger puzzle, we feel.

Huawei: even with two different internal implementations you can still maintain two paralel NAS connections with the same or different PLMNs.

**Decision:** The document was **not pursued**.

**S3-223811 Add restriction for multi registrations in two PLMNs**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1520 Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not pursued**.

**S3-223416 Address issue in NSSAA procedures for multiple registration**

*Type: CR For: Agreement  
 33.501 v16.12.0 CR-1495 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson commented that this had been brought for several years and we sent our comments several times. They noted that this wasn’t applicable for a frozen release either.

Nokia: same comments as Ericsson. They had another proposal in tdoc 810.

**Decision:** The document was **not pursued**.

**S3-223417 Address issue in NSSAA procedures for multiple registration (mirror)**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1496 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not pursued**.

**S3-223808 Discussin paper on control on NSSAA procedures for multi registrations in two PLMNs**

*Type: discussion For: Endorsement  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223810 control on NSSAA procedures for multi registrations in two PLMNs**

*Type: CR For: Agreement  
 33.501 v16.12.0 CR-1519 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Ericsson: second sentence in first change should be a NOTE.

NOTE 1 may not be applied in certain cases.

Qualcomm: this is SA3 stuff, irrelevant for security.

Interdigital: some changes are not really coming from SA2 at all.

The Chair queried whether some LS to SA2 would answer the questions and get some clarification.

**Decision:** The document was **not pursued**.

**S3-223812 control on NSSAA procedures for multi registrations in two PLMNs**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1521 Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not pursued**.

**S3-223202 CR NRF deployments**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1437 rev 1 Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Ericsson, Mavenir, Huawei, HiSilicon*

(Replaces S3-221867)

**Discussion:**

Mavenir: conclusion of the key issue in the study should be this CR.

Nokia: we want a parallel WID to capture the normative content together with the study.

**Decision:** The document was **agreed**.

**S3-223394 User plane security for Non-SBA based interfaces**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1430 rev 1 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-221789)

**Discussion:**

NTT-Docomo: clarify that it shall be used unless security is provided by other means.

Ericsson: N4 is not an user interface.

Docomo: shall be used instead of supported.

MCC: remove the revision marks on the cover page.

**Decision:** The document was **revised to S3-223949**.

**S3-223949 User plane security for Non-SBA based interfaces**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1430 rev 2 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223394)

**Decision:** The document was **agreed**.

**S3-223414 Address EN1 on S-NSSAI mapping**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1493 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson: the SA2 term is aligned with SA3 actually.

**Decision:** The document was **not pursued**.

**S3-223415 Address EN2 on AF Authorization**

*Type: CR For: Agreement  
 33.501 v17.7.0 CR-1494 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223606 clarification on PLMN ID verification in SNPN**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1501 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223941**.

**S3-223941 clarification on PLMN ID verification in SNPN**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1501 rev 1 Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

(Replaces S3-223606)

**Decision:** The document was **agreed**.

**S3-223662 SECOP correction**

*Type: CR For: (not specified)  
 33.310 v17.4.0 CR-0137 Cat: A (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Ericsson: start in an earlier release. This is a correction.

Huawei: check the baseline, we think this was addressed already.

**Decision:** The document was **revised to S3-223942**.

**S3-223942 SECOP correction**

*Type: CR For: -  
 33.310 v17.4.0 CR-0137 rev 1 Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223662)

**Decision:** The document was **not pursued**.

**S3-223685 Aligning DNS and ICMP security for non-3GPP access with 3GPP access**

*Type: CR For: Agreement  
 33.402 v17.0.0 CR-0147 Cat: F (Rel-18)  
  
 Source: Ericsson*

**Decision:** The document was **endorsed**.

**S3-223782 CR\_33.501 R17 Update Subscription and unsubscription procedure of NSACF notification service**

*Type: CR For: Approval  
 33.501 v17.7.0 CR-1517 Cat: F (Rel-17)  
  
 Source: Xiaomi Communication*

**Decision:** The document was **merged**.

**S3-223214 Introduction of DTLS 1.3**

*Type: CR For: Approval  
 33.210 v17.1.0 CR-0075 Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **withdrawn**.

**S3-223456 Adding AAnF critical assets and threats to TR 33.926**

*Type: CR For: Approval  
 33.926 v17.5.0 CR-0064 Cat: B (Rel-18)  
  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **withdrawn**.

**S3-223901 [MCXSec3] 33180 R18 Incorrect reference (Mirror)**

*Type: CR For: Decision  
 33.180 v17.7.0 CR-0204 Cat: A (Rel-18)  
  
 Source: Airbus*

**Decision:** The document was **withdrawn**.

**S3-223150 LS on anonymous user access to an AF**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C3-224730*

**Decision:** The document was **replied to in S3-223921**.

**S3-223943 SECOP correction**

*Type: CR For: Agreement  
 33.310 v16.11.0 CR-0144 Cat: F (Rel-16)  
  
 Source: Nokia*

**Decision:** The document was **withdrawn**.

**S3-223948 LS on NSSAA procedures for multiple registrations**

*Type: LS out For: Approval  
 to SA2, cc CT4  
 Source: Huawei*

**Decision:** The document was **noted**.

## 5 Rel-18 Studies

### 5.1 Study on 5G security enhancement against false base stations

**S3-223284 FBS - Way forward for solutions based on digital signatures addressing KI#2**

*Type: pCR For: Endorsement  
 33.809 v0.20.0  
 Source: Philips International B.V.*

**Decision:** The document was **not treated**.

**S3-223372 Conclusion for KI #2**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-223732 Conclusion for key issue#2**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: Samsung, Intel, Apple*

**Discussion:**

ORANGE: what are we protecting from? We have been getting the same conclusion after several years and I still object to this.

BT: given the discussions on post quantum activities in NIST we are not ready to conclude until we decide how we should work in the post-quantum environment, where we would need to rework a lot of stuff. If I had to choose I would go for Qualcomm's proposal.

Cablelabs: digital signature-based solution is supported by us, but we will ready when the post quantum situation arrives. At the moment we should agree on this.

Huawei: there is an editor's note to be resolved, we are not concluded.

Intel: solution 19 works only in RRC connected state.

Nokia: ten solution proposals for key issue 2. Whatever solution we select will have a tricky part. Maybe we should categorise the solutions and consider a risk assessment.

Vodafone liked Nokia's comment. They also said that the problem was if the user could not connect due to the whole digital signature process.

ORANGE: not enough evaluation for this solution. We should stop this study, it has been running for too long.

CableLabs: let's do security, not performance.ORANGE replied that it was about solutions that work.

BT: either solution achieves the purpose of the study, which is stopping False Base Stations.

CableLabs: replay attack can be mitigated with this solution, we make it extremely hard for the FSB to attack like this.

Qualcomm: not diffficult to listen to the message and rebroacast.

CalbleLabs: with timestamp it is harder because we can detect the delay.

The Chair commented that there were multiple regulator agencies asking for solutions and that there were papers looking at the TR and pointing out the lack of solutions.

ORANGE replied that they didn’t oppose to the purpose, but it was the current state of the TR that didn’t allow progress.E.g. there is no way to handle the bidding down attacks. This can be solved with a new study in 6G.

Qualcomm: ask the regulators what threats need to be addressed.

The Chair replied that PWS and SIP protection. Qualcomm replied that for PWS there were application layer solutions, no impact on the network, and even that was difficult for some countries.

The Chair commented that one of the problems was that regulators didn’t come to SA3, so it was pretty hard to progress.

BT: PWS had a good solution in the beginning but no regulator agreed on who held the root key. BT commented that ENISA would come the next day so some input could be gathered.

Google: we support digital signature. Shared model is not relevant.

ORANGE: no authentication related, this is for FSBs.

Qualcomm: time to close the study so as not to repeat the same discussions again and again.

Apple: lack of progress is the result of objections of some companies.

**Decision:** The document was **noted**.

**S3-223733 Updates to Solution#7 SI verification using Digital Signatures**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: Samsung*

**Decision:** The document was **not treated**.

**S3-223734 Resolving EN of solution#7 (TR 33.809)**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: Samsung*

**Decision:** The document was **not treated**.

**S3-223614 5GFBS - Addressing UE bahaviors on signature verification**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: Apple*

**Decision:** The document was **not treated**.

**S3-223883 Addressing the editor’s note in 6.27.2.1.1 of Sol#27**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: CableLabs*

**Decision:** The document was **not treated**.

**S3-223885 Addressing EN on NR Repeater in 6.27.2.2.4 of Sol#27**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: CableLabs*

**Decision:** The document was **not treated**.

**S3-223886 Addressing the editor’s note in 6.27.2.2.1of Sol#27**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: CableLabs, Deutsche Telekom, Philips International B.V.*

**Decision:** The document was **not treated**.

**S3-223285 FBS - Additions in solution #25**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: Philips International B.V.*

**Decision:** The document was **not treated**.

**S3-223286 FBS - Evaluation of solution #25**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: Philips International B.V.*

**Decision:** The document was **not treated**.

**S3-223373 Conclusion for KI #3**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **not treated**.

**S3-223420 Update to solution #25**

*Type: pCR For: Approval  
 33.809 v0.20.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223615 5GFBS - Reply LS on authenticity and replay protection of system information**

*Type: LS out For: Approval  
 to RAN2  
 Source: Apple*

**Decision:** The document was **noted**.

**S3-223708 LS on Evaluation of Digital Signature schemes for the false base station study**

*Type: LS out For: Approval  
 to ETSI SAGE  
 Source: Oy LM Ericsson AB*

**Decision:** The document was **noted**.

**S3-223731 Reply LS on authenticity and replay protection of system information**

*Type: LS out For: Approval  
 to RAN2  
 Source: Samsung, Apple, CableLabs*

**Discussion:**

Qualcomm: we cannot reply if there is no consensus here.

Apple: this is not really the case.

ORANGE and Qualcomm pointed out that any outgoing LS on this topic would be objected.

**Decision:** The document was **noted**.

### 5.2 Study on Security Impacts of Virtualisation

**S3-223387 Address EN on PACF and MANO Communication**

*Type: pCR For: Approval  
 33.848 v0.14.0  
 Source: Johns Hopkins University APL, US National Security Agency, CISA ECD*

**Decision:** The document was **revised to S3-224065**.

**S3-224065 Address EN on PACF and MANO Communication**

*Type: pCR For: Approval  
 33.848 v0.14.0  
 Source: Johns Hopkins University APL, US National Security Agency, CISA ECD*

(Replaces S3-223387)

**Decision:** The document was **noted**.

**S3-223393 Address EN on Verifying Attestation Results for NRF and PACF**

*Type: pCR For: Approval  
 33.848 v0.14.0  
 Source: Johns Hopkins University APL, US National Security Agency, CISA ECD*

**Decision:** The document was **noted**.

**S3-223496 Evaluation on Solution 5**

*Type: pCR For: Approval  
 33.848 v0.14.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223608 New solution on boot time attestation at 3GPP function level**

*Type: pCR For: Approval  
 33.848 v0.14.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson objected to this contribution.

**Decision:** The document was **noted**.

**S3-224066 LS on embedding MnF in PACF security function**

*Type: LS out For: Approval  
 to SA5  
 Source: John Hopkins Univeristy*

**Discussion:**

Huawei: there was no agreement to send an LS during the breakout session.

**Decision:** The document was **noted**.

### 5.3 Study on Security Aspects of Proximity Based Services in 5GS Phase 2

**S3-223233 New Key issue for Updating security policy parameters when device is out of 5G coverage**

*Type: pCR For: (not specified)  
 33.740 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Interdigital: we don’t accept new key issues if there are no requirements.

Qualcomm agreed with that statement. Not clear what problem we are trying to solve.

ORANGE: We can add requirements later but not in this meeting.

**Decision:** The document was **noted**.

**S3-223421 Discussion for L2 UE-to-Network Relay Multi-Path Security**

*Type: discussion For: Endorsement  
 33.740 v..  
 Source: OPPO*

**Decision:** The document was **noted**.

**S3-223447 KI for L2 UE-to-Network Relay Multi-Path Security**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: OPPO*

**Discussion:**

Qualcomm,Nokia and Ericsson: we cannot agree with this key issue.

**Decision:** The document was **noted**.

**S3-223623 New KI: Support for Emergency service over UE-to-Network Relaying**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Ericsson*

**Discussion:**

Interdigital,Huawei and Vodafone: some more conten tneeds to be added to the threats.

MCC: just refer to the TR, no need to say SA2 and Release 18 here.

**Decision:** The document was **revised to S3-223996**.

**S3-223996 New KI: Support for Emergency service over UE-to-Network Relaying**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Ericsson*

(Replaces S3-223623)

**Decision:** The document was **approved**.

**S3-223721 Key Issue for secure ProSe multi-path transmission for UE-to-Network relay**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Samsung*

**Discussion:**

Ericsson, Qualcomm didn’t agree with this.Some support from Nokia.

**Decision:** The document was **noted**.

**S3-223817 new KI for path switching between two indirect network communication paths**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Qualcomm couldn’t agree with this key issue. No necessity to align the security policies between both relay services.

**Decision:** The document was **noted**.

**S3-223247 Update KI#5**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: OPPO*

**Decision:** The document was **revised to S3-223963**.

**S3-223963 Update KI#5**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: OPPO*

(Replaces S3-223247)

**Decision:** The document was **approved**.

**S3-223894 KI #3 update: authorization synchronization**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: MITRE Corporation*

**Abstract:**

This pCR proposes an update to KI #3 in TR 33.740 to address authorization synchronization

**Decision:** The document was **noted**.

**S3-223248 New solution for KI#5**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: OPPO*

**Discussion:**

Qualcomm: incorrect solution. Not clear which protection methods to use.

Vodafone: evaluation doesn't highlight some of the issues. Evaluation needs to be ctritical.

**Decision:** The document was **revised to S3-224029**.

**S3-224029 New solution for KI#5**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: OPPO*

(Replaces S3-223248)

**Decision:** The document was **approved**.

**S3-223369 A new solution for UE-to-UE Relay discovery message protection for Model A discovery**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Qualcomm Incorporated*

**Discussion:**

ORANGE: remove the evaluation part and put an editor's note.

**Decision:** The document was **revised to S3-223997**.

**S3-223997 A new solution for UE-to-UE Relay discovery message protection for Model A discovery**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-223369)

**Decision:** The document was **approved**.

**S3-223370 A new solution for UE-to-UE Relay discovery message protection for Model B discovery**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-223998**.

**S3-223998 A new solution for UE-to-UE Relay discovery message protection for Model B discovery**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-223370)

**Decision:** The document was **approved**.

**S3-223371 A new solution for secure PC5 link establishment for UE-to-UE Relay**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Qualcomm Incorporated*

**Discussion:**

Interdigital: Only works when relay is in coverage.

XIaomii: security can be provided by the application layer.

**Decision:** The document was **revised to S3-223999**.

**S3-223999 A new solution for secure PC5 link establishment for UE-to-UE Relay**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-223371)

**Decision:** The document was **approved**.

**S3-223469 New solution to establish UE-to-UE security**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223964**.

**S3-223964 New solution to establish UE-to-UE security**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223469)

**Decision:** The document was **approved**.

**S3-223624 Support Emergency Service over UE-to-Network Relay**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-224005**.

**S3-224005 Support Emergency Service over UE-to-Network Relay**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Ericsson*

(Replaces S3-223624)

**Decision:** The document was **approved**.

**S3-223664 pCR to TR33.740 Solution for U2U Relay discovery message security**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

**Decision:** The document was **revised to S3-223965**.

**S3-223965 pCR to TR33.740 Solution for U2U Relay discovery message security**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

(Replaces S3-223664)

**Decision:** The document was **approved**.

**S3-223722 New solution for hop-by-hop security establishment for the UE-to-UE Relay**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-223966**.

**S3-223966 New solution for hop-by-hop security establishment for the UE-to-UE Relay**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Samsung*

(Replaces S3-223722)

**Decision:** The document was **approved**.

**S3-223766 New solution on security for discovery integrated into PC5 link establishment**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

**Decision:** The document was **revised to S3-223967**.

**S3-223967 New solution on security for discovery integrated into PC5 link establishment**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

(Replaces S3-223766)

**Decision:** The document was **approved**.

**S3-223818 security solution for path switching between two indirect network communication paths**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223276 ProSe - Evaluation Solution #10**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Philips International B.V.*

**Discussion:**

Qualcomm: further evaluation is FFS, on the choice for the application layer.

**Decision:** The document was **revised to S3-224006**.

**S3-224006 ProSe - Evaluation Solution #10**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Philips International B.V.*

(Replaces S3-223276)

**Decision:** The document was **approved**.

**S3-223277 ProSe - Evaluation Solution #15**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Philips International B.V.*

**Discussion:**

Qualcomm: incorrect baseline, I cannot see what editor's note was removed.

Phillips admitted the omission of revision marks here.

Interdigital: add editor's note in evaluation.

Ericsson needed clarification on the evaluation, proposing more editor's notes.

The Chair proposed to come back in the next meeting with an update of this.

**Decision:** The document was **noted**.

**S3-223278 ProSe - Minnor editorial corrections in Solution #10**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Philips International B.V.*

**Decision:** The document was **approved**.

**S3-223279 ProSe - Minnor updates in Solution #10**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Philips International B.V.*

**Decision:** The document was **approved**.

**S3-223310 Update TR 33.740 solution #1**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **revised to S3-223969**.

**S3-223969 Update TR 33.740 solution #1**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-223310)

**Decision:** The document was **approved**.

**S3-223311 Update TR 33.740 solution #2**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

**Discussion:**

Huawei: we need the alignment with SA2. This was taken offline.

**Decision:** The document was **approved**.

**S3-223312 Update TR 33.740 solution #12**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

**Discussion:**

Qualcomm: we need more time to evaluate this, an editor's note is needed.

**Decision:** The document was **revised to S3-224000**.

**S3-224000 Update TR 33.740 solution #12**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-223312)

**Decision:** The document was **approved**.

**S3-223313 Update TR 33.740 solution #13**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

**Discussion:**

Qualcomm proposed to add an editor's note on the evaluation FFS

**Decision:** The document was **revised to S3-224001**.

**S3-224001 Update TR 33.740 solution #13**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-223313)

**Decision:** The document was **approved**.

**S3-223314 Update TR 33.740 solution #14**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **revised to S3-224007**.

**S3-224007 Update TR 33.740 solution #14**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-223314)

**Decision:** The document was **approved**.

**S3-223400 Update to solution#5 in TR 33.740 - align with SA2**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: China Telecom Corporation Ltd.*

**Discussion:**

Interdigital: alignment with SA2 is needed.

**Decision:** The document was **revised to S3-223970**.

**S3-223970 Update to solution#5 in TR 33.740 - align with SA2**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: China Telecom Corporation Ltd.*

(Replaces S3-223400)

**Decision:** The document was **approved**.

**S3-223401 Update to solution#5 in TR 33.740 - remove the EN**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: China Telecom Corporation Ltd.*

**Decision:** The document was **approved**.

**S3-223451 Update to ProSe Security Sol#6**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: OPPO*

**Discussion:**

Huawei: there is SA2 content.

OPPO: this is a TR, not normative.

**Decision:** The document was **revised to S3-223972**.

**S3-223972 Update to ProSe Security Sol#6**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: OPPO*

(Replaces S3-223451)

**Decision:** The document was **approved**.

**S3-223452 Address ENs in Sol#6 for ProSe Security**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: OPPO*

**Decision:** The document was **approved**.

**S3-223453 Add Evaluation for ProSe Security Sol#6**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: OPPO*

**Discussion:**

Interdigital, Qualcomm proposed editor's notes.

**Decision:** The document was **revised to S3-224008**.

**S3-224008 Add Evaluation for ProSe Security Sol#6**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: OPPO*

(Replaces S3-223453)

**Decision:** The document was **noted**.

**S3-223475 Evaluate to the solution #3**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223476 Evaluate to the solution #5**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224009**.

**S3-224009 Evaluate to the solution #5**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223476)

**Decision:** The document was **approved**.

**S3-223477 Evaluate to the solution #15**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223968**.

**S3-223968 Evaluate to the solution #15**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223477)

**Decision:** The document was **approved**.

**S3-223478 Evaluate to the solution #20**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223626 Evaluation to solution #3**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Ericsson*

**Discussion:**

Qualcomm: third paragraph already exists in security details. Huawei didn’t agree with this paragraph either.

Interdigital: add an editor's note for alignment with SA2.

**Decision:** The document was **revised to S3-223973**.

**S3-223973 Evaluation to solution #3**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Ericsson*

(Replaces S3-223626)

**Decision:** The document was **approved**.

**S3-223627 Evaluation to solution #4**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Ericsson*

**Discussion:**

Intgerdigital: we still need to analyze the auth token included in the DCR message, it may lead to privacy issues.

Huawei: not sure if the evaluation is needed, because we need to address first the editor's note on the need for auth token (under step2).

**Decision:** The document was **noted**.

**S3-223628 Resolve EN of U2U determination in target UE in Solution3**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-223629 Resolve EN of Direct Communication Invite in Solution3**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Ericsson*

**Discussion:**

Interdigital: we don’t agree with the removal of the editor's note.

**Decision:** The document was **revised to S3-224002**.

**S3-224002 Resolve EN of Direct Communication Invite in Solution3**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Ericsson*

(Replaces S3-223629)

**Decision:** The document was **approved**.

**S3-223636 pCR to TR33.740 Update Solution16 for removing ENs**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

**Decision:** The document was **revised to S3-223974**.

**S3-223974 pCR to TR33.740 Update Solution16 for removing ENs**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

(Replaces S3-223636)

**Decision:** The document was **approved**.

**S3-223638 pCR to TR33.740 Update Solution17 for removing ENs**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

**Discussion:**

Huawei: why are you excluding the PCF now?

**Decision:** The document was **revised to S3-224003**.

**S3-224003 pCR to TR33.740 Update Solution17 for removing ENs**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

(Replaces S3-223638)

**Decision:** The document was **approved**.

**S3-223641 pCR to TR33.740 Update Solution18 for removing ENs**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

**Decision:** The document was **not treated**.

**S3-223643 pCR to TR33.740 Evaluation of Solution16**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

**Discussion:**

Interdigital: key issue#3 is not fully covered.

**Decision:** The document was **revised to S3-223975**.

**S3-223975 pCR to TR33.740 Evaluation of Solution16**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

(Replaces S3-223643)

**Decision:** The document was **approved**.

**S3-223644 pCR to TR33.740 Evaluation of Solution17**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

**Decision:** The document was **revised to S3-224004**.

**S3-224004 pCR to TR33.740 Evaluation of Solution17**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

(Replaces S3-223644)

**Decision:** The document was **approved**.

**S3-223659 pCR to TR33.740 Evaluation of Solution18**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

**Decision:** The document was **not treated**.

**S3-223723 Updates to solution#19 and resolving EN #2 and #3**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Samsung*

**Decision:** The document was **approved**.

**S3-223724 Updates to solution#19 and resolving EN #5**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Samsung*

**Discussion:**

Qualcomm needed more clarification how the new text addresses the editor's note on the impact on the protocol stack.

Huawei: this is not addressing layer 3. An editor's note was added about this.

**Decision:** The document was **revised to S3-223976**.

**S3-223976 Updates to solution#19 and resolving EN #5**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Samsung*

(Replaces S3-223724)

**Decision:** The document was **approved**.

**S3-223763 Update to solution #8 in TR 33.740**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

**Decision:** The document was **not treated**.

**S3-223764 Update to solution #9 in TR 33.740**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

**Decision:** The document was **not treated**.

**S3-223765 Update to solution #20 in TR 33.740**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

**Discussion:**

Ericsson didn’t understand step 2 as it appeared as a new interface and how it aligned with SA2 architecture.

Qualcomm also had several issues.

**Decision:** The document was **revised to S3-223977**.

**S3-223977 Update to solution #20 in TR 33.740**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

(Replaces S3-223765)

**Decision:** The document was **approved**.

**S3-223470 Conclusion on UE-to-UE relay security**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Interdigital: note it because the solution needs reworking in another contribution.

Ericsson and Qualcomm had the same comment.

**Decision:** The document was **revised to S3-224095**.

**S3-224095 Conclusion on UE-to-UE relay security**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223470)

**Decision:** The document was **approved**.

**S3-223471 Conclusion on UE-to-UE relay Authorisation**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

CATT had a different view, they had their own proposal in 667.

Samsung asked to postpone boht conclusions.

**Decision:** The document was **revised to S3-223995**.

**S3-223995 Conclusion on UE-to-UE relay Authorisation**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223471)

**Decision:** The document was **approved**.

**S3-223666 pCR to TR33.740 Conclusion of key issue #1**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

**Decision:** The document was **noted**.

**S3-223667 pCR to TR33.740 Conclusion of key issue #3**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

**Discussion:**

Huawei had issues with this conclusion.

Ericsson also wanted to postpone this.

Interdigital thought it was too early for this conclusion.

**Decision:** The document was **noted**.

**S3-223661 pCR to TR33.740 Update Abbreviations**

*Type: pCR For: Approval  
 33.740 v0.3.0  
 Source: CATT*

**Decision:** The document was **approved**.

**S3-223322 Living document to TS 33.503 for Prose Secondary Authentication**

*Type: draftCR For: Approval  
 33.503 v17.1.0  
 Source: InterDigital, Europe, Ltd.*

**Abstract:**

In principle under a PROSESA AI, since not allocated for SA3#109 is put under 5.3 as per Chair guidance

**Decision:** The document was **not treated**.

**S3-223625 [Draft] LS on ProSe Secondary Authentication**

*Type: LS out For: Agreement  
 to SA2  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223971 Draft TR 33.740**

*Type: draft TR For: Approval  
 33.740 v0.4.0  
 Source: CATT*

**Decision:** The document was **approved**.

### 5.4 Study on privacy of identifiers over radio access

**S3-223200 PCR to 33.870 Changes to Solution #2**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: InterDigital, Inc.*

**Abstract:**

This contribution proposes changes to Solution #2 in TR 33.870.

**Decision:** The document was **revised to S3-224069**.

**S3-224069 PCR to 33.870 Changes to Solution #2**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: InterDigital, Inc.*

(Replaces S3-223200)

**Decision:** The document was **noted**.

**S3-223201 PCR to 33.870 - New clause for mapping solutions and KIs**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: InterDigital, Inc.*

**Abstract:**

This contribution proposes the addition of a new clause to TR 33.870.

**Decision:** The document was **not treated**.

**S3-223223 PCR to 33.870 - Aggregate changes**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: InterDigital, Inc.*

**Abstract:**

This contribution provides strictly editorial changes to TR 33.870.

**Decision:** The document was **not treated**.

**S3-223237 New solution for prevention of detection of priority access**

*Type: pCR For: (not specified)  
 33.870 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223238 EN removal for privacy prevention of NAI solution**

*Type: pCR For: (not specified)  
 33.870 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224114**.

**S3-224114 EN removal for privacy prevention of NAI solution**

*Type: pCR For: -  
 33.870 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223238)

**Decision:** The document was **approved**.

**S3-223376 Resolution of an EN in solution #8**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **not treated**.

**S3-223377 Evaluation of solution #8**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-224176**.

**S3-224176 Evaluation of solution #8**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-223377)

**Decision:** The document was **approved**.

**S3-223406 Remove EN to Key Issue #2**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: Johns Hopkins University APL, US National Security Agency, InterDigital, Apple, CableLabs*

**Decision:** The document was **not treated**.

**S3-223446 Remove EN and Provide Evaluation for Solution #4**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224174**.

**S3-224174 Remove EN and Provide Evaluation for Solution #4**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223446)

**Decision:** The document was **noted**.

**S3-223540 Updates to solution 3 based on pseudonyms**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224134**.

**S3-224134 Updates to solution 3 based on pseudonyms**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223540)

**Discussion:**

Huawei: we need the evaluation uniform for all solutions. Ericsson agreed.

**Decision:** The document was **approved**.

**S3-223561 Policy-based C-RNTI and TMSI refresh**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: Intel*

**Decision:** The document was **not treated**.

**S3-223578 Resolution of EN in solution #8**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: THALES, Qualcomm Incorporated*

**Abstract:**

This contribution resolves EN in solution #8 of TR 33.870.

**Decision:** The document was **not treated**.

**S3-223826 Updating Solution #9: Concealing length of SUPIs in SUCIs by padding the SUPIs**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: Oy LM Ericsson AB*

**Decision:** The document was **not treated**.

**S3-223870 Update to Solution #1 in ID Privacy**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: Lenovo*

**Decision:** The document was **revised to S3-224033**.

**S3-224033 Update to Solution #1 in ID Privacy**

*Type: pCR For: Approval  
 33.870 v0.4.0  
 Source: Lenovo*

(Replaces S3-223870)

**Decision:** The document was **approved**.

**S3-224164 Draft TR 33.870**

*Type: draft TR For: Approval  
 33.870 v0.5.0  
 Source: Interdigital*

**Decision:** The document was **approved**.

### 5.5 Study on Standardising Automated Certificate Management in SBA

**S3-223380 Evaluation for Solution #3**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Ericsson: private CA term is misleading.

CableLabs: change the privacy terminology.

**Decision:** The document was **revised to S3-223986**.

**S3-223986 Evaluation for Solution #3**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223380)

**Decision:** The document was **approved**.

**S3-223381 Evaluation for Solution #11**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Huawei: questionable as optimization.Fine to keep it for the record but not good for normative work.

**Decision:** The document was **revised to S3-223987**.

**S3-223987 Evaluation for Solution #11**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223381)

**Decision:** The document was **approved**.

**S3-223382 Resolving EN and evaluation for Solution #10**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Ericsson had some issues with the evaluation. ExtendedKeyUsage not only for client and server TLS.

Vodafone: evaluation is incomplete.

Huawei: this is not new.

**Decision:** The document was **noted**.

**S3-223383 Resolving EN and evaluation for Solution #12**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Cisco liked the contribution overall, but the initial trust is mentioned as implementation specific. Some more content was needed here. Point the solution.

Vodafone: evaluation should be a quick analysis not a repetition of what is above. It should be completed or removed.

Huawei: third party interaction needs to be standardised? Too ambitious. Good for the record but not good for normative phase.

Ericsson suggested adding some editor's notes.

**Decision:** The document was **revised to S3-223991**.

**S3-223991 Resolving EN and evaluation for Solution #12**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223383)

**Decision:** The document was **approved**.

**S3-223514 address EN for solution #8 and add evaluation**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson: impact on OAM interfaces.

MCC: reword to remove the "must".

**Decision:** The document was **revised to S3-223992**.

**S3-223992 address EN for solution #8 and add evaluation**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223514)

**Decision:** The document was **approved**.

**S3-223515 address EN for solution #9 and add evaluation**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson wanted to have some more issues captured in the evaluation.

MCC: check spelling and add reference to TS 23.501.

**Decision:** The document was **revised to S3-223993**.

**S3-223993 address EN for solution #9 and add evaluation**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223515)

**Decision:** The document was **approved**.

**S3-223543 Update to solution #3**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson: revocation is done by the authorities. We are not OK with the note.

**Decision:** The document was **revised to S3-223994**.

**S3-223994 Update to solution #3**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223543)

**Decision:** The document was **approved**.

**S3-223407 Clarify the use of cross-certificates**

*Type: pCR For: (not specified)  
 33.876 v0.4.0  
 Source: China Telecommunications*

**Decision:** The document was **not treated**.

**S3-223385 Preliminary conclusion for KI #1**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Huawei: we support the conclusion,the analysis not so much.

Ericsson: clarification on the conclusion needed.

CableLabs: include ACME as part of the solution. The Chair replied that this was discarded before.

Google: we are not against this proposal, we just want an editor's note opening the door for enhancements in other studies. The Chair replied that SA3 didn’t include such notes and that enhancements were always part of studies.

ORANGE: the conclusion has an editor's note about this already.

Huawei: don’t make it dependent on ACME or we will object.

**Decision:** The document was **approved**.

**S3-223516 add conclusion for KI # 6**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223384 Solution for ensuring the management of bulk certificate updates**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Ericsson: not OK, we prefer Huawei solution in 544 from the operations point of view.

Nokia: opinion of operators?

Nokia: this is a study phase, it's not about liking/not liking.

Huawei: both solutions can go in, but the other solution is the one which will go to normative work.

The Chair commented that objecting to competing solutions was not the way to go in a study. You can compare later and decide.

ORANGE: what we include in the TR must be agreed by consensus.

Qualcomm: don’t include any solution that comes in a study, it needs to be viable so the companies can make better use of the time when evaluating them later.

Huawei: we don’t understand the link to the radio celll network oad. This should be removed.

**Decision:** The document was **revised to S3-224139**.

**S3-224139 Solution for ensuring the management of bulk certificate updates**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223384)

**Decision:** The document was **approved**.

**S3-223544 Policy based certificate update/renewal**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224140**.

**S3-224140 Policy based certificate update/renewal**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223544)

**Decision:** The document was **approved**.

**S3-223895 Proposal Solution #XX ACME use in 3GPP**

*Type: pCR For: Approval  
 33.876 v0.4.0  
 Source: Google Inc.*

**Discussion:**

Ericsson: we need more time to study the proposal in the context of SBA.

Nokia: similar comments to Ericsson. This doesn’t explain how ACME fits in the SBA. We have certificates already defined in TS 33.310. IPX is out of scope.

Huawei: related more to IPX, it looks like it’s in scope of GSMA.

CableLabs supported this as an option to be added to the TR as further analysis

Google: not IPX but 5GC.We are happy to clarify further on how this worls in TS 33.310.

Ericsson: it's a new protocol in telecoms. Token signing will not work without DNS and many other dependecies that need to be checked.

Nokia: timing is an issue here, we would like to conclude the key issue next meeting.

**Decision:** The document was **noted**.

**S3-223827 PCR to TR33.876 - Addition of Key Issue - Protection of private keys at rest**

*Type: pCR For: Agreement  
 33.876 v0.4.0  
 Source: Vodafone España SA*

**Discussion:**

Huawei: no need for a solution. It's more like a deployment guidelines. Vodafone confirmed this.

**Decision:** The document was **merged**.

**S3-223828 PCR to 33.876 - Addition of Key Issue: security of internal NF service communicaitons**

*Type: pCR For: Agreement  
 33.876 v0.4.0  
 Source: Vodafone España SA*

**Discussion:**

Vodafone: securing services to services talking together.

Ericsson agreed with the contribution.

**Decision:** The document was **revised to S3-224138**.

**S3-224138 PCR to 33.876 - Addition of Key Issue: security of internal NF service communicaitons**

*Type: pCR For: Agreement  
 33.876 v0.4.0  
 Source: Vodafone España SA*

(Replaces S3-223828)

**Decision:** The document was **approved**.

**S3-224165 Draft TR 33.876**

*Type: draft TR For: Approval  
 33.876 v0.5.0  
 Source: Nokia*

**Decision:** The document was **approved**.

### 5.6 New SID on AKMA phase 2

**S3-223215 Terminology update of solution #6**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Lenovo*

**Decision:** The document was **approved**.

**S3-223267 alignment for solution1 for vAAnF or a new NF**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-223268 alignment for solution1 related to internal AF**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-223269 solution 1 evaluation**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224078**.

**S3-224078 solution 1 evaluation**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223269)

**Decision:** The document was **approved**.

**S3-223287 AKMA - Evaluation Solution #10**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Philips International B.V.*

**Decision:** The document was **revised to S3-224010**.

**S3-224010 AKMA - Evaluation Solution #10**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Philips International B.V.*

(Replaces S3-223287)

**Decision:** The document was **approved**.

**S3-223432 Address EN and add evaluation for solution 9**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-224032**.

**S3-224032 Address EN and add evaluation for solution 9**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: ZTE Corporation*

(Replaces S3-223432)

**Decision:** The document was **approved**.

**S3-223433 Address EN and update solution 3**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: ZTE Corporation*

**Decision:** The document was **approved**.

**S3-223436 Update the solution 4**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: ZTE Corporation*

**Decision:** The document was **approved**.

**S3-223579 Resolution of ENs in solution #14**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: THALES*

**Abstract:**

This contribution resolves ENs in solution #14 of TR 33.737.

**Decision:** The document was **revised to S3-224115**.

**S3-224115 Resolution of ENs in solution #14**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: THALES*

(Replaces S3-223579)

**Decision:** The document was **approved**.

**S3-223580 Update of LI requirements on solution #5**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: LG Electronics France*

**Decision:** The document was **revised to S3-224057**.

**S3-224057 Update of LI requirements on solution #5**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: LG Electronics France*

(Replaces S3-223580)

**Decision:** The document was **approved**.

**S3-223581 Update of LI requirements on solution #12**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: LG Electronics France*

**Decision:** The document was **revised to S3-224058**.

**S3-224058 Update of LI requirements on solution #12**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: LG Electronics France*

(Replaces S3-223581)

**Decision:** The document was **approved**.

**S3-223717 Resolving EN and adding evaluation for solution#13**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-224030**.

**S3-224030 Resolving EN and adding evaluation for solution#13**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Samsung*

(Replaces S3-223717)

**Decision:** The document was **approved**.

**S3-223785 KI#1 New sol AKMA roaming for external AF in the Data Network**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Xiaomi Communication*

**Decision:** The document was **revised to S3-224071**.

**S3-224071 KI#1 New sol AKMA roaming for external AF in the Data Network**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Xiaomi Communication*

(Replaces S3-223785)

**Decision:** The document was **approved**.

**S3-223832 New solution for AKMA roaming with VPLMN AKMA Support NF for inbound roamers**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-224141**.

**S3-224141 New solution for AKMA roaming with VPLMN AKMA Support NF for inbound roamers**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Ericsson*

(Replaces S3-223832)

**Decision:** The document was **approved**.

**S3-223455 Discussion Paper on evaluations and conclusions of key issue#1**

*Type: discussion For: Endorsement  
 33.737 v..  
 Source: China Mobile (Suzhou) Software*

**Discussion:**

Qualcomm: merge solutions for the next meeting, since we need to pick up components from different solutions.

Ericsson: focus on the conclusions now and it will help find the solutions.

**Decision:** The document was **noted**.

**S3-223270 KI1 conclusion**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell, Lenovo, OPPO*

**Decision:** The document was **not treated**.

**S3-223675 Conclusion for KI#1 case 2**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Discussion:**

It was commented the role of LI aspects here.

NTT-Docomo: if the AF is in VPLMN no normative work is required.

**Decision:** The document was **revised to S3-224137**.

**S3-224137 Conclusion for KI#1 case 2**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223675)

**Decision:** The document was **approved**.

**S3-223434 Conclusion for KI#1**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: ZTE Corporation*

**Decision:** The document was **not treated**.

**S3-223505 conclusion on AKMA roaming**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Discussions on LI aspects.

Mark (National Technical Assistance) : uncomfortable with conclusions that forget about LI aspects. An editor's note on this was added.

Vodafone: if this affects the visited network I have an issue.

**Decision:** The document was **revised to S3-224136**.

**S3-224136 conclusion on AKMA roaming**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223505)

**Decision:** The document was **approved**.

**S3-223271 Discussion on privacy issue in AKMA**

*Type: discussion For: Endorsement  
 33.737 v..  
 Source: Nokia, Nokia Shanghai Bell, Samsung*

**Decision:** The document was **not treated**.

**S3-223272 key issue on AKMA privacy**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell, Samsung*

**Decision:** The document was **not treated**.

**S3-223715 Key Issue on KAF refresh**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Samsung, Nokia, Nokia Shanghai Bell, OPPO, ZTE*

**Discussion:**

Qualcomm didn’t agree with this contribution. The Kecs refresh needs to be studied further. The key issue needs to be rewritten to algin with the study approved in SA.

**Decision:** The document was **noted**.

**S3-223716 New solution on AKMA KAF refresh**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: Samsung*

**Decision:** The document was **not treated**.

**S3-223435 Update the Key issue of AKMA roaming**

*Type: pCR For: Approval  
 33.737 v0.3.0  
 Source: ZTE Corporation*

**Decision:** The document was **not treated**.

**S3-223535 Discussion**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

**S3-224109 Draft TR 33.737**

*Type: draft TR For: Approval  
 33.737 v0.4.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

### 5.7 Study of Security aspect of home network triggered primary authentication

**S3-223359 Adding a K\_AUSF refresh use case**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-223511 Update KI#1**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224011**.

**S3-224011 Update KI#1**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223511)

**Decision:** The document was **approved**.

**S3-223274 KI#1 conclusion**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **merged**.

**S3-223361 Proposed conclusion for the study**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **merged**.

**S3-223542 Conclusion on KI#1 and KI#2 in TR 33.741**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223610 Discussion paper on way forward for conclusion**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223720 Conclusion on KI#1**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Samsung*

**Decision:** The document was **merged**.

**S3-223769 Conclusion on KI#1**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

**Decision:** The document was **merged**.

**S3-223840 Conlusions**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Ericsson*

**Discussion:**

Qualcomm: I will object if you are tie with any use case. It should be generic.

Nokia: generic statements will open new discussions. We have three use cases clearly defined.

Huawei: different use cases will have specific issues. Let's leave this for the normative work.

Ericsson wanted to handle the interworking case.

Qualcomm: plesae address this use case in a different way (another WID or CR, etc…), this is supposed to be generic.

**Decision:** The document was **revised to S3-224013**.

**S3-224013 Conlusions**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Ericsson*

(Replaces S3-223840)

**Decision:** The document was **approved**.

**S3-223273 solution 1 evaluation**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224014**.

**S3-224014 solution 1 evaluation**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223273)

**Discussion:**

Addressing Ericsson's and Lenovo's comments.

**Decision:** The document was **approved**.

**S3-223360 Adding an evaluation of solution #5**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Qualcomm Incorporated*

**Discussion:**

Lenovo: this solution opens to any AMF and we would like to see the use case for this scenario.

**Decision:** The document was **revised to S3-224015**.

**S3-224015 Adding an evaluation of solution #5**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-223360)

**Decision:** The document was **approved**.

**S3-223437 Add evaluation to solution #3**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: ZTE Corporation*

**Decision:** The document was **approved**.

**S3-223438 Add some context to solution #3**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-224017**.

**S3-224017 Add some context to solution #3**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: ZTE Corporation*

(Replaces S3-223438)

**Decision:** The document was **approved**.

**S3-223439 Removal of Editor’s Notes of solution #3**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: ZTE Corporation*

**Decision:** The document was **approved**.

**S3-223502 Update solution2**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224018**.

**S3-224018 Update solution2**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223502)

**Decision:** The document was **approved**.

**S3-223503 update the 5.1**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Lenovo: it doesn’t capture correctly the key issues.

**Decision:** The document was **approved**.

**S3-223718 Resolving EN and adding evaluation for solution#9**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Samsung*

**Decision:** The document was **approved**.

**S3-223719 Resolving EN and adding evaluation for solution#6**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-224019**.

**S3-224019 Resolving EN and adding evaluation for solution#6**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Samsung*

(Replaces S3-223719)

**Decision:** The document was **approved**.

**S3-223768 Update to solution #7 in TR 33.741**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

**Decision:** The document was **approved**.

**S3-223836 Solution #11 updates**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-223837 Solution #11 evalution**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-224020**.

**S3-224020 Solution #11 evalution**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Ericsson*

(Replaces S3-223837)

**Decision:** The document was **approved**.

**S3-223838 Solution #12 updates**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-223839 Solution #12 evalution**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-224021**.

**S3-224021 Solution #12 evalution**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Ericsson*

(Replaces S3-223839)

**Decision:** The document was **approved**.

**S3-223872 Update to Solution #8 in HONTRA**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Lenovo*

**Decision:** The document was **revised to S3-224022**.

**S3-224022 Update to Solution #8 in HONTRA**

*Type: pCR For: Approval  
 33.741 v0.3.0  
 Source: Lenovo*

(Replaces S3-223872)

**Decision:** The document was **approved**.

**S3-224016 draft TR 33.741**

*Type: draft TR For: Approval  
 33.741 v0.4.0  
 Source: Huawei*

**Decision:** The document was **approved**.

### 5.8 Study on security aspects of enablers for Network Automation for 5G – phase 3

**S3-223688 Update of Key Issue #3 "Security for AI/ML model storage and sharing" on authorization by the NF which generated the AI/ML model**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-223217 Update of solution #4**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Lenovo*

**Discussion:**

Ericsson wasn't sure that the editor's notes were addressed here. Huawei had also some issues with the key management editor's notes.

**Decision:** The document was **revised to S3-224146**.

**S3-224146 Update of solution #4**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Lenovo*

(Replaces S3-223217)

**Decision:** The document was **approved**.

**S3-223389 Resolving ENs and evaluation for Solution #7**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224144**.

**S3-224144 Resolving ENs and evaluation for Solution #7**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223389)

**Decision:** The document was **approved**.

**S3-223392 Evaluation for Solution #3**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Ericsson: this is really complex.

Nokia: I can revised to capture the complexity in the evaluation.

Huawei suggested another editor's note.

**Decision:** The document was **revised to S3-224145**.

**S3-224145 Evaluation for Solution #3**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223392)

**Decision:** The document was **approved**.

**S3-223563 Updates to solution 2: remove EN E2E protection**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Intel*

**Decision:** The document was **revised to S3-224147**.

**S3-224147 Updates to solution 2: remove EN E2E protection**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Intel*

(Replaces S3-223563)

**Decision:** The document was **approved**.

**S3-223657 Authorization of AI/ML model sharing between different vendors and usage of one-time URLs**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Ericsson*

**Discussion:**

Huawei: align with SA2's conclusion.Capture implementation in IETF in a note.

Nokia had also some issues, the contribution had to be revised.

**Decision:** The document was **revised to S3-224148**.

**S3-224148 Authorization of AI/ML model sharing between different vendors and usage of one-time URLs**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Ericsson*

(Replaces S3-223657)

**Decision:** The document was **approved**.

**S3-223689 Solution on Token based Authorization of AI/ML Model sharing between different vendors(ADRF)**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Ericsson*

**Discussion:**

Intel: we support this contribution and co-sign it.

Huawei: align with SA2 conclusions.

**Decision:** The document was **revised to S3-224149**.

**S3-224149 Solution on Token based Authorization of AI/ML Model sharing between different vendors(ADRF)**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Ericsson*

(Replaces S3-223689)

**Decision:** The document was **approved**.

**S3-223690 Solution on Authorization of AI/ML Model sharing between different vendors(MTLF)**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Ericsson*

**Discussion:**

Huawei: alignment with SA2.

Nokia: maybe consider this a use case of the previous contribution.I can live with it.

**Decision:** The document was **revised to S3-224150**.

**S3-224150 Solution on Authorization of AI/ML Model sharing between different vendors(MTLF)**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Ericsson*

(Replaces S3-223690)

**Decision:** The document was **approved**.

**S3-223691 New solution for KI#3 to support authorization of AI/ML model sharing By NWDAF containing MTLF(local auth)**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Ericsson*

**Discussion:**

Nokia: not ok with this solution. This key issue should always use OATH.

Huawei: this needs more work. Relationship between inputs and outputs? Add editor's notes to capture our questions.

**Decision:** The document was **revised to S3-224151**.

**S3-224151 New solution for KI#3 to support authorization of AI/ML model sharing By NWDAF containing MTLF(local auth)**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Ericsson*

(Replaces S3-223691)

**Decision:** The document was **approved**.

**S3-223391 Evaluation for Solution #5**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224079**.

**S3-224079 Evaluation for Solution #5**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223391)

**Decision:** The document was **approved**.

**S3-223660 Add evaluation to Solution #8**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224077**.

**S3-224077 Add evaluation to Solution #8**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223660)

**Decision:** The document was **approved**.

**S3-223663 New solution on protection of data and analytics exchange in roaming case using Secure Multi-party Computation**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224075**.

**S3-224075 New solution on protection of data and analytics exchange in roaming case using Secure Multi-party Computation**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223663)

**Decision:** The document was **approved**.

**S3-223665 Update to solution#8**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **revised to S3-224076**.

**S3-224076 Update to solution#8**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: China Mobile (Suzhou) Software*

(Replaces S3-223665)

**Decision:** The document was **approved**.

**S3-223388 Solution for authorization in FL**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223560 FL GROUP AUTHORIZATION OF NWDAF(S) IN 5GC**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Intel*

**Decision:** The document was **not treated**.

**S3-223687 New solution for KI#2 to support authorization of participant NWDAFs in FL**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223390 Evaluation for Solution #6**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223874 Update to Solution #9 in eNA Ph3**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Lenovo*

**Decision:** The document was **not treated**.

**S3-223216 New solution addressing KI#6**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Lenovo, Nokia*

**Decision:** The document was **not treated**.

**S3-223875 Cyber attack detection**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: Lenovo*

**Decision:** The document was **not treated**.

**S3-223645 Add conclusion to key issue #1**

*Type: pCR For: Approval  
 33.738 v0.3.0  
 Source: China Mobile (Suzhou) Software*

**Decision:** The document was **noted**.

**S3-224178 Draft TR 33.738**

*Type: draft TR For: Approval  
 33.738 v0.4.0  
 Source: China Mobile*

**Decision:** The document was **approved**.

### 5.9 Study on Security Enhancement of support for Edge Computing — phase 2

**S3-223228 New Solution of authorization for EDGE-9 reference point**

*Type: pCR For: Approval  
 33.739 v0.2.0  
 Source: InterDigital Communications*

**Decision:** The document was **not treated**.

**S3-223362 Method negotiation using TLS 1.3**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Qualcomm Incorporated*

**Discussion:**

Samsung: overheard when sending the parameters.

NTT-Docomo: small issue.

**Decision:** The document was **revised to S3-223940**.

**S3-223940 Method negotiation using TLS 1.3**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-223362)

**Decision:** The document was **approved**.

**S3-223363 Common authentication method between EEC and ECS/EES**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **not treated**.

**S3-223440 Add conclusion to KI#2.2**

*Type: pCR For: Approval  
 33.739 v0.2.0  
 Source: ZTE Corporation*

**Decision:** The document was **not treated**.

**S3-223441 Add evaluation to solution #6**

*Type: pCR For: Approval  
 33.739 v0.2.0  
 Source: ZTE Corporation*

**Decision:** The document was **not treated**.

**S3-223448 Resolving ENs in Solution #9 for Edge Security**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: OPPO*

**Decision:** The document was **not treated**.

**S3-223449 Resolving ENs in Solution #10 for Edge Security**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: OPPO*

**Decision:** The document was **not treated**.

**S3-223450 Resolving ENs in Solution #11 for Edge Security**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: OPPO*

**Decision:** The document was **not treated**.

**S3-223545 Conclusion on KI#2.5:Authentication and Authorization between AC and EEC**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-223546 Addressing the ENs in solution 15**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223547 Addressing the ENs in solution 16**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223548 Evaluation to solution 15**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223549 Evaluation to solution 16**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223551 Evaluation to solution 18**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224028**.

**S3-224028 Evaluation to solution 18**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223551)

**Decision:** The document was **approved**.

**S3-223585 Conclusion on KI2.3 Authentication and Authorization between V-ECS and H-ECS**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson needed some more clarification.More things needed to be included here.

Samsung didn’t agree with this contribution.

**Decision:** The document was **revised to S3-224023**.

**S3-224023 Conclusion on KI2.3 Authentication and Authorization between V-ECS and H-ECS**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223585)

**Decision:** The document was **approved**.

**S3-223586 Conclusion on KI2.2 Authentication mechanism selection**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223939**.

**S3-223939 Conclusion on KI2.2 Authentication mechanism selection**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223586)

**Decision:** The document was **noted**.

**S3-223587 Conclusion on KI1.1 How to authorize PDU session to support local traffic routing to access an EHE in the VPLMN**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson: more information is needed from SA2, maybe an LS would help.

**Decision:** The document was **approved**.

**S3-223616 MEC - New key issue on AF specific identifier**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Apple*

**Decision:** The document was **revised to S3-224012**.

**S3-224012 MEC - New key issue on AF specific identifier**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Apple*

(Replaces S3-223616)

**Decision:** The document was **not treated**.

**S3-223617 MEC- Addressing the EN#1 in solution#7**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Apple*

**Decision:** The document was **not treated**.

**S3-223618 MEC- Addressing the EN#2 in solution#7 on default authentication mechanism**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Apple*

**Decision:** The document was **not treated**.

**S3-223651 A new solution for EEC authentication**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223652 Updating solution #17**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223653 Resolving ENs in solution #13**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-224025**.

**S3-224025 Resolving ENs in solution #13**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Ericsson*

(Replaces S3-223653)

**Decision:** The document was **approved**.

**S3-223654 Evaluation of solution #13**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Ericsson*

**Discussion:**

IT was clarified that existing AKMA mechanisms refer to Release 17 AKMA.

**Decision:** The document was **revised to S3-224026**.

**S3-224026 Evaluation of solution #13**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Ericsson*

(Replaces S3-223654)

**Decision:** The document was **approved**.

**S3-223655 Evaluation of solution #14**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-224027**.

**S3-224027 Evaluation of solution #14**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Ericsson*

(Replaces S3-223655)

**Decision:** The document was **approved**.

**S3-223656 Evaluation of solution #17**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223725 Resolving EN in solution#4**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Samsung*

**Decision:** The document was **not treated**.

**S3-223726 Resolving EN in solution#3**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Samsung*

**Decision:** The document was **not treated**.

**S3-223727 Resolving EN and adding evaluation for solution#21**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Samsung*

**Decision:** The document was **not treated**.

**S3-223728 Discussion paper on authentication mechanism selection**

*Type: discussion For: Discussion  
 33.739 v..  
 Source: Samsung*

**Discussion:**

Apple didn’t propose Proposal 1.

Ericsson supported proposal 1 but not proposal 2.

**Decision:** The document was **noted**.

**S3-223729 Conclusion for KI#2.2**

*Type: pCR For: Approval  
 33.739 v0.3.0  
 Source: Samsung*

**Decision:** The document was **not treated**.

**S3-223784 KI #2.2, New sol on authentication mechanism selection method for edge scenarios**

*Type: pCR For: Approval  
 33.739 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **not treated**.

**S3-223795 Resolve EN in Sol #5**

*Type: pCR For: Approval  
 33.739 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **not treated**.

**S3-224024 Draft TR 33.739**

*Type: draft TR For: Approval  
 33.739 v0.4.0  
 Source: Huawei*

**Decision:** The document was **approved**.

### 5.10 Study on Personal IoT Networks Security Aspects

**S3-223280 PIN - Addressing EN#1 in Solution #4**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Philips International B.V.*

**Discussion:**

Thales disagrees. It's addressing matters out of scope of this key issue.

IDEMIA: we don’t want having credentials here.

**Decision:** The document was **revised to S3-224073**.

**S3-224073 PIN - Addressing EN#1 in Solution #4**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Philips International B.V.*

(Replaces S3-223280)

**Decision:** The document was **approved**.

**S3-223281 PIN - Addressing EN#2 in Solution #4**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Philips International B.V.*

**Decision:** The document was **revised to S3-224059**.

**S3-224059 PIN - Addressing EN#2 in Solution #4**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Philips International B.V.*

(Replaces S3-223281)

**Decision:** The document was **approved**.

**S3-223282 PIN - Addressing EN#3 in Solution #4**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Philips International B.V.*

**Discussion:**

ORANGE: you mean 5GS user plane?

Phillips said yes and ORANGE asked to clarify it.

Thales: we disagree with the statement on the credentials.

**Decision:** The document was **revised to S3-224074**.

**S3-224074 PIN - Addressing EN#3 in Solution #4**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Philips International B.V.*

(Replaces S3-223282)

**Decision:** The document was **approved**.

**S3-223283 PIN - Addressing EN#4 in Solution #4**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Philips International B.V.*

**Discussion:**

Thales: QoS associated with the authentication?

Phillips: to protect the first hop. In case of attack the QoS is impacted.

Huawei: provided QoS value is not concluded in SA2.

**Decision:** The document was **revised to S3-224060**.

**S3-224060 PIN - Addressing EN#4 in Solution #4**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Philips International B.V.*

(Replaces S3-223283)

**Decision:** The document was **approved**.

**S3-223304 Update solution for PINE authentication over CP**

*Type: pCR For: Approval  
 33.882 v3.0.0  
 Source: vivo*

**Discussion:**

Ericsson: hard to read, spkit into different clauses.

ORANGE: evaluation FFS, hard to confirm in this meeting.

Qualcomm: SA2's scope, we can note this.

Vivo: Authentication is SA3's scope. This is also transparent to 5GC.

**Decision:** The document was **noted**.

**S3-223306 Sol#3 Resolution of EN on authorization of PEGC**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Interdigital: The editor's note is not satisfied.

Nokia: it is an editor's note added by ourselves.

**Decision:** The document was **revised to S3-224088**.

**S3-224088 Sol#3 Resolution of EN on authorization of PEGC**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223306)

**Decision:** The document was **approved**.

**S3-223307 Sol#3 Resolution of EN on identification of PINE**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-223308 Sol#3 Adding Evaluation**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Ericsson, Qualcomm: first paragraph needs rewording.

**Decision:** The document was **revised to S3-224062**.

**S3-224062 Sol#3 Adding Evaluation**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223308)

**Decision:** The document was **approved**.

**S3-223521 Addressing the ENs in solution 1**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224063**.

**S3-224063 Addressing the ENs in solution 1**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223521)

**Decision:** The document was **approved**.

**S3-223300 New solution for AF manipulate PIN**

*Type: pCR For: Approval  
 33.882 v3.0.0  
 Source: vivo*

**Discussion:**

NTT-Docomo: not obvious how the key issue is being solved. Not agains this but it needs more text.

Qualcomm: remove evaluation.

Nokia was in line with previous comments.

**Decision:** The document was **revised to S3-224064**.

**S3-224064 New solution for AF manipulate PIN**

*Type: pCR For: Approval  
 33.882 v3.0.0  
 Source: vivo*

(Replaces S3-223300)

**Decision:** The document was **approved**.

**S3-223301 New solution for PINE authentication and authorization by PEMC**

*Type: pCR For: Approval  
 33.882 v3.0.0  
 Source: vivo*

**Decision:** The document was **noted**.

**S3-223302 New solution for PINE authentication and authorization over 5G UP**

*Type: pCR For: Approval  
 33.882 v3.0.0  
 Source: vivo*

**Discussion:**

ORANGE didn’t agree with this evaluation.

**Decision:** The document was **noted**.

**S3-223303 New solution for remote provisioning of credential for PINE**

*Type: pCR For: Approval  
 33.882 v3.0.0  
 Source: vivo*

**Discussion:**

ORANGE: nothing about provisioning in key issue 1. Thales supported this.

**Decision:** The document was **noted**.

**S3-223309 Ki#1 New Solution using AKMA**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

ORANGE: last sentence on AKMA? You propose to modify a TS, which hasn’t been agreed in a WID. Does this mean that when we go normative you will modify AKMA?

Vodafone: this limits the operators who use AKMA.

Qualcomm: in the figure: Ipsec with AKMA is not needed in the figure, it is already protected. This is not related to EAP.

Huawei agreed with Qualcomm.

**Decision:** The document was **noted**.

**S3-223378 Solution for KI#1: Authentication and Authorization of PINE**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Qualcomm Incorporated*

**Discussion:**

Interdigital: step 5 executed while PEGC processes PINE data transfer request?

Qualcomm revised to clarify this.

**Decision:** The document was **revised to S3-224067**.

**S3-224067 Solution for KI#1: Authentication and Authorization of PINE**

*Type: pCR For: Approval  
 33.882 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-223378)

**Decision:** The document was **approved**.

**S3-223305 Interim conclusions on KI#1**

*Type: pCR For: Approval  
 33.882 v3.0.0  
 Source: vivo*

**Decision:** The document was **noted**.

**S3-223196 LS on Support PIN application architecture and interaction**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S6-223028*

**Decision:** The document was **replied to in S3-224068**.

**S3-223299 Reply LS on Support PIN application architecture and interaction**

*Type: LS out For: Approval  
 to SA WG6  
 Source: vivo*

**Discussion:**

Thales: we don’t address provisioning of credentials.

Qualcomm: on Q6 we can say that SA3 is studying the key issue and stop there.

ORANGE: there is no key issue for credential provisioning, you need to start with that.

**Decision:** The document was **revised to S3-224068**.

**S3-224068 Reply LS on Support PIN application architecture and interaction**

*Type: LS out For: Approval  
 to SA WG6  
 Source: vivo*

(Replaces S3-223299)

**Decision:** The document was **approved**.

**S3-224061 Draft TR 33.882**

*Type: draft TR For: Approval  
 33.882 v0.4.0  
 Source: Vivo*

**Decision:** The document was **approved**.

### 5.11 Study on SNAAPP security

**S3-223488 Address EN for solution 1**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224101**.

**S3-224101 Address EN for solution 1**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223488)

**Decision:** The document was **approved**.

**S3-223290 Sol#3 Resolution of EN on CAPIF support**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-223291 Sol#3 Resolution of EN on visibility of application**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224038**.

**S3-224038 Sol#3 Resolution of EN on visibility of application**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223291)

**Decision:** The document was **approved**.

**S3-223292 Sol#3 Resolution of EN on prearranged policies**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224039**.

**S3-224039 Sol#3 Resolution of EN on prearranged policies**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223292)

**Decision:** The document was **approved**.

**S3-223293 Sol#3 Resolution of EN on authorization of third party**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224040**.

**S3-224040 Sol#3 Resolution of EN on authorization of third party**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223293)

**Decision:** The document was **approved**.

**S3-223294 Sol#3 Resolution of EN on AKMA Usage**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224041**.

**S3-224041 Sol#3 Resolution of EN on AKMA Usage**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223294)

**Decision:** The document was **approved**.

**S3-223295 Sol#3 Resolution of EN on Mutual Authentication**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223296 Sol#3 Resolution of EN on Client Credential Grant**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223297 Sol#3 Adding Evaluation**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224042**.

**S3-224042 Sol#3 Adding Evaluation**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223297)

**Decision:** The document was **approved**.

**S3-223876 Update to Solution #4 in SNAAPPY**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Lenovo*

**Decision:** The document was **not treated**.

**S3-223658 A solution for authorization before allowing access to resources**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223738 New Solution on User Authorization in API Invocation**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Samsung*

**Decision:** The document was **not treated**.

**S3-223739 New Solution on Resource owner Authorization in API Invocation using AKMA**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Samsung*

**Decision:** The document was **not treated**.

**S3-223792 KI#2, New Sol UE credential based API invocation procedure**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **not treated**.

**S3-223790 KI#2, New Sol OAuth 2.0 based API invocation procedure**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **not treated**.

**S3-223867 New solution: PKCE flow based authorization**

*Type: pCR For: (not specified)  
 33.884 v0.2.0  
 Source: DOCOMO Communications Lab.*

**Decision:** The document was **not treated**.

**S3-223871 new solution: Subscriber vs. user authorization**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: DOCOMO Communications Lab.*

**Decision:** The document was **not treated**.

**S3-223877 Solution to address KI#2 in SNAAPPY**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Lenovo*

**Decision:** The document was **not treated**.

**S3-223791 KI#2, New Sol on User authorization revocation for API invocation procedure**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **not treated**.

**S3-223489 Conclusion for key issue #2**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223873 Conclusion to use oAuth based authorization**

*Type: pCR For: Approval  
 33.884 v0.2.0  
 Source: DOCOMO Communications Lab.*

**Decision:** The document was **noted**.

**S3-224106 Draft TR 33.884**

*Type: draft TR For: Approval  
 33.884 v0.3.0  
 Source: NTT-Docomo*

**Decision:** The document was **approved**.

**S3-224167 LS reply on CAPIF authorization roles related to FS\_SNAAPP**

*Type: LS in For: discussion  
 Original outgoing LS: -, to -, cc -  
 Source: S6-223489*

**Decision:** The document was **postponed**.

**S3-224168 LS reply on SNAAPP requirements clarifications**

*Type: LS in For: discussion  
 Original outgoing LS: -, to -, cc -  
 Source: S6-223488*

**Decision:** The document was **postponed**.

### 5.12 Study on enhanced security for network slicing Phase 3

**S3-223412 Discussion on KI#1**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223209 Update to KI#1 providing VPLMN slice information to roaming UE**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: NEC Corporation*

**Decision:** The document was **noted**.

**S3-223410 Update to KI#1**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Thales: SA2 didn’t decide the parameters for the UDM and they are under scope of CT1. We don’t know if there is need for security. That's why Thales didn’t provide requirements in 577.

**Decision:** The document was **noted**.

**S3-223442 Update to KI#1 providing VPLMN slice information to roaming UE**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: ZTE Corporation*

**Decision:** The document was **not treated**.

**S3-223577 Update of KI #1**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: THALES*

**Abstract:**

This contribution completes KI #1 of TR 33.886.

**Discussion:**

Vodafone: if you are going to use Steering of Roaming here we will object.

**Decision:** The document was **noted**.

**S3-223796 Update to KI#1**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **not treated**.

**S3-223878 Update to KI#1 Providing VPLMN slice information to roaming UE**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Lenovo*

**Decision:** The document was **not treated**.

**S3-223813 update to KI#2 temporary network slice**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223413 Update to KI#3**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223815 update to KI#3 network slice admission control**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223210 New solution to KI#1: Protection of SoR related information from UE to home network**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: NEC Corporation*

**Decision:** The document was **not treated**.

**S3-223411 New solution to KI#1**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223443 New solution to KI#1 protecting capability indication in UE initiated VPLMN slice-based SoR**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: ZTE Corporation*

**Decision:** The document was **not treated**.

**S3-223786 KI#1 New sol on enhanced slice aware information protection**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **not treated**.

**S3-223787 KI#1 New sol on Integrity protection for network triggered UE capability indication procedure.**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **not treated**.

**S3-223788 KI#1 New sol on Integrity protection for UE initiated capability indication procedure**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **not treated**.

**S3-223814 solution for KI#2 temporary network slice for NSSAA**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223816 security solution for KI#3 network slice admission control**

*Type: pCR For: Approval  
 33.886 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

### 5.13 Study on Security aspects for 5WWC Phase 2

**S3-223252 Discussion paper of WWC SID update for TNAP mobility**

*Type: discussion For: Endorsement  
 33.887 v..  
 Source: Nokia, Nokia Shanghai Bell,CableLabs, Lenovo, Apple*

**Decision:** The document was **noted**.

**S3-223253 New SID on Security aspects for 5WWC Phase 2**

*Type: SID revised For: Approval  
 Source: Nokia, Nokia Shanghai Bell, CableLabs, Lenovo, Apple*

**Discussion:**

Huawei didn’t agree with the changes in the justification.

ORANGE and Thales didn’t agree with the sentence on AUN3 devices. This was removed.

Revised to address these and other comments,

**Decision:** The document was **revised to S3-224047**.

**S3-224047 Revised SID on Security aspects for 5WWC Phase 2**

*Type: SID revised For: Approval  
 Source: Nokia, Nokia Shanghai Bell, CableLabs, Lenovo, Apple*

(Replaces S3-223253)

**Decision:** The document was **agreed**.

**S3-223259 evaluation for solution 1**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224048**.

**S3-224048 evaluation for solution 1**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223259)

**Discussion:**

Adding Huawei's comments on impact on existing network functions.

**Decision:** The document was **approved**.

**S3-223497 A new solution to KI#1**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223498 conclusion to KI#1**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223851 Addressing EN in Solution 2**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs*

**Discussion:**

Ericsson: SUCI protection instead of SUPI encryption.

Lenovo: only ther user name not the whole NAI.

**Decision:** The document was **revised to S3-224049**.

**S3-224049 Addressing EN in Solution 2**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs*

(Replaces S3-223851)

**Decision:** The document was **approved**.

**S3-223852 Addressing EN in Solution 3**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs*

**Discussion:**

Same comments as the previous contribution.

**Decision:** The document was **revised to S3-224050**.

**S3-224050 Addressing EN in Solution 3**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs*

(Replaces S3-223852)

**Decision:** The document was **approved**.

**S3-223853 Addressing EN in Solution 4**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs*

**Decision:** The document was **revised to S3-224051**.

**S3-224051 Addressing EN in Solution 4**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs*

(Replaces S3-223853)

**Decision:** The document was **approved**.

**S3-223856 Conclusions for KI#1**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs, Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224052**.

**S3-224052 Conclusions for KI#1**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs, Nokia, Nokia Shanghai Bell*

(Replaces S3-223856)

**Decision:** The document was **approved**.

**S3-223499 Update KI#3**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224152**.

**S3-224152 Update KI#3**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223499)

**Decision:** The document was **noted**.

**S3-223500 Solution to KI#3**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224153**.

**S3-224153 Solution to KI#3**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223500)

**Decision:** The document was **noted**.

**S3-223501 Conclusion to KI#3**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224154**.

**S3-224154 Conclusion to KI#3**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223501)

**Decision:** The document was **noted**.

**S3-223257 TNAP mobility solution with rand value**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell, CableLabs,*

**Discussion:**

Qualcomm: add evaluation clause.

**Decision:** The document was **revised to S3-224053**.

**S3-224053 TNAP mobility solution with rand value**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell, CableLabs,*

(Replaces S3-223257)

**Decision:** The document was **approved**.

**S3-223258 TNAP mobility solution with count**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell, CableLabs,*

**Decision:** The document was **revised to S3-224054**.

**S3-224054 TNAP mobility solution with count**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell, CableLabs,*

(Replaces S3-223258)

**Decision:** The document was **approved**.

**S3-223364 Proposed solution for TNAP mobility**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Qualcomm Incorporated*

**Discussion:**

CableLab: key derivation needs to be verified.

Qualcomm: we are using IEEE specs.

CableLabs: editor's note just to check, we may not have to change anything.

Nokia: we need to analyse the key generation.

**Decision:** The document was **revised to S3-224055**.

**S3-224055 Proposed solution for TNAP mobility**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-223364)

**Decision:** The document was **approved**.

**S3-223512 update KI#4**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-223881 Solution to address KI#4 in 5WWC**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Lenovo*

**Decision:** The document was **approved**.

**S3-223513 a new KI on TNAP mobility with full authentication**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

CableLabs: not sure this is needed. It is already in SA2 spec.

Qualcomm: this exists already.

**Decision:** The document was **noted**.

**S3-223611 A new solution on TNAP mobility with full authentication**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223857 Key issue on authentication of UE behind RG**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs, Nokia, Nokia Shanghai Bell*

**Discussion:**

Ercisson: there are Rel-16 procedures for this. Offloading only?

Qualcomm: related to the CR with the UE behind the RG? CableLabs confirmed.

Qualcomm: then this is not in scope of the study. We need more discussion on the architecture before considering this key issue and the CR.

CableLabs: this is part of the objectives of the Study.

**Decision:** The document was **noted**.

**S3-223858 Solution for authentication of UE behind RG using NSWO**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs*

**Decision:** The document was **noted**.

**S3-223859 Key issue on authentication of N5CW devices behind RG**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs, Nokia, Nokia Shanghai Bell*

**Discussion:**

Huawei didn’t agree with this contribution.

**Decision:** The document was **noted**.

**S3-223887 Key issue on authentication of AUN3 device without 5G credentials**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: CableLabs*

**Decision:** The document was **not treated**.

**S3-223255 Scope section alignment**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223256 TNAP mobility architecture assumptions**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223254 updating the existing solution mapping**

*Type: pCR For: Approval  
 33.887 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-224056 Draft TR 33.887**

*Type: draft TR For: Approval  
 33.887 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

### 5.14 Study on the security aspects of Artificial Intelligence (AI)/Machine Learning (ML) for the NG-RAN

**S3-223479 Update to KI#2**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224159**.

**S3-224159 Update to KI#2**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223479)

**Decision:** The document was **approved**.

**S3-223830 New Key issue on the security of the information transfer of the RAN AI/ML framework**

*Type: pCR For: Approval  
 33.877 v0.3.0  
 Source: Ericsson*

**Discussion:**

Nokia: we support this key issue.

Ericsson: RAN3 hasn’t finished, that’s why we have the editor's note.

Qualcomm: we revisit when RAN3 is done, so we can note this.

**Decision:** The document was **noted**.

**S3-224160 Draft TR 33.877**

*Type: draft TR For: discussion  
 33.877 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

### 5.15 Study on security support for Next Generation Real Time Communication services

**S3-223597 EN addressing for solution#2**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224157**.

**S3-224157 EN addressing for solution#2**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223597)

**Decision:** The document was **approved**.

**S3-223598 Adding conclusion to KI#3**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223599 New solution to KI#2**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224158**.

**S3-224158 New solution to KI#2**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223599)

**Decision:** The document was **approved**.

**S3-223600 Discussion on way forward for KI#1**

*Type: discussion For: Endorsement  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223601 Adding conclusion to KI#1**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223841 Resolve 4 ENs in Solution#1**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-224142**.

**S3-224142 Resolve 4 ENs in Solution#1**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Ericsson*

(Replaces S3-223841)

**Decision:** The document was **approved**.

**S3-223842 Add Evaluation for Solution#1**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-224143**.

**S3-224143 Add Evaluation for Solution#1**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Ericsson*

(Replaces S3-223842)

**Decision:** The document was **approved**.

**S3-223843 New solution: How to avoid e2ae limitation and achieve e2e security for IMS Data Channel**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-224124**.

**S3-224124 New solution: How to avoid e2ae limitation and achieve e2e security for IMS Data Channel**

*Type: pCR For: Approval  
 33.890 v0.3.0  
 Source: Ericsson*

(Replaces S3-223843)

**Decision:** The document was **approved**.

**S3-224179 Draft TR 33.890**

*Type: draft TR For: Approval  
 33.890 v0.4.0  
 Source: Huawei*

**Decision:** The document was **approved**.

### 5.16 Study on security aspects of enhanced support of Non-Public Networks phase 2

**S3-223168 Questions for SUCI protection requirements for non-3GPP (WLAN) access to SNPN**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2207700*

**Decision:** The document was **replied to in S3-224175**.

**S3-223175 Progress and open issues for NPN enhancements in Rel-18**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2209860*

**Decision:** The document was **replied to in S3-224175**.

**S3-223574 draft\_Reply LS to Progress and open issues for NPN enhancements in Rel-18**

*Type: LS out For: (not specified)  
 to SA2  
 Source: Intel*

**Decision:** The document was **merged**.

**S3-223374 SUCI protection for non-3GPP (WLAN) access to SNPN**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-223375 Reply LS on Progress and open issues for NPN enhancements in Rel-18**

*Type: LS out For: Approval  
 to SA2, cc SA1, CT1, CT3, CT4, RAN2, RAN3  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-224175**.

**S3-224175 Reply LS on Progress and open issues for NPN enhancements in Rel-18**

*Type: LS out For: Approval  
 to SA2, cc SA1, CT1, CT3, CT4, RAN2, RAN3  
 Source: Qualcomm Incorporated*

(Replaces S3-223375)

**Decision:** The document was **approved**.

**S3-223491 Reply LS on Progress and open issues for NPN enhancements in Rel-18**

*Type: LS out For: Approval  
 to SA2  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223218 Solution for Trusted non-3GPP Access for SNPN**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Lenovo*

**Decision:** The document was **revised to S3-224034**.

**S3-224034 Solution for Trusted non-3GPP Access for SNPN**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Lenovo*

(Replaces S3-223218)

**Discussion:**

Adding an editor's note on the evaluation.

**Decision:** The document was **approved**.

**S3-223219 Solution for Untrusted non-3GPP Access for SNPN**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Lenovo*

**Discussion:**

Ericsson: why do we need something new for untrusted?

**Decision:** The document was **revised to S3-224035**.

**S3-224035 Solution for Untrusted non-3GPP Access for SNPN**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Lenovo*

(Replaces S3-223219)

**Discussion:**

Adding an editor's note on the evaluation.

**Decision:** The document was **approved**.

**S3-223804 Proposal for a solution for KI#1 - Anonymous authentication during connection establishment in trusted non-3GPP network access**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-223490 New solution on Reusing N3GPP authentication for NPN**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224037**.

**S3-224037 New solution on Reusing N3GPP authentication for NPN**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223490)

**Decision:** The document was **approved**.

**S3-223669 Removal of ENs in Sol#3**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-223668 Solution to KI#1 – NSWO in SNPN**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

**S3-223670 Conclusions for KI#1**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Ericsson*

**Discussion:**

IDEMIA: NSWO doesn’t apply to SNPN according to SA2.

Lenovo had an alternative solution.

Thales: too soon to conclude during this meeting, we have several options.

Nokia agreed, too soon.

Qualcomm: don’t conclude in this meeting.

**Decision:** The document was **noted**.

**S3-223558 Access to localized services using existing mechanisms**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Intel*

**Discussion:**

Thales: provisioning is not defined in 3GPP.

**Decision:** The document was **revised to S3-224043**.

**S3-224043 Access to localized services using existing mechanisms**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Intel*

(Replaces S3-223558)

**Decision:** The document was **approved**.

**S3-223559 Access to localized services using AKMA mechanisms**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Intel*

**Discussion:**

ORANGE: better not add provisioning in the TR. AKMA can be used to secure the connection. Add no impact on normative work.

Qualcomm and Thales objected to the contribution.

**Decision:** The document was **noted**.

**S3-223693 New Solution to KI#2: Authentication for UE access to hosting network**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Ericsson*

**Discussion:**

Thales: in addition to the primary auth or directly the secondary authentication?

Ericsson: mostly about primary auth.

**Decision:** The document was **revised to S3-224044**.

**S3-224044 New Solution to KI#2: Authentication for UE access to hosting network**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Ericsson*

(Replaces S3-223693)

**Decision:** The document was **approved**.

**S3-223789 KI#2 New sol Mutual authentication between UE and hosting network**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Xiaomi Communication*

**Discussion:**

Interdigital didn’t agree with this contribution.

ORANGE didn’t understand the contribution.

**Decision:** The document was **noted**.

**S3-223805 Proposal for a solution to KI#2 - PALS authentication through onboarding procedure and afterwards registration**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224045**.

**S3-224045 Proposal for a solution to KI#2 - PALS authentication through onboarding procedure and afterwards registration**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223805)

**Decision:** The document was **approved**.

**S3-223806 Proposal for a solution to KI#2 - PALS authentication through onboarding procedure and afterwards registration**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224046**.

**S3-224046 Proposal for a solution to KI#2 - PALS authentication through onboarding procedure and afterwards registration**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223806)

**Decision:** The document was **approved**.

**S3-223793 New KI on Protect prioritized list of hosting networks in hosting network scenarios**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Xiaomi Communication*

**Discussion:**

Ericsson: we don’t need a key issue, we can go directly to the conclusion, it's very small.

Qualcomm supported this.

ORANGE as well.

**Decision:** The document was **noted**.

**S3-223794 New Sol on Protection of prioritized list of hosting networks**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **noted**.

**S3-223694 Preliminary conclusions to KI#2: Authentication for UE access to hosting network**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Ericsson*

**Decision:** The document was **noted**.

**S3-223227 Key issue on SN Name binding for Kausf in SNPN using AAA server for primary authentication**

*Type: pCR For: (not specified)  
 33.858 v0.2.0  
 Source: InterDigital Communications*

**Decision:** The document was **not treated**.

**S3-223692 Security aspects of Support for enhanced mobility by enabling support for idle and connected mode mobility between SNPNs without new network selection**

*Type: pCR For: Approval  
 33.858 v0.2.0  
 Source: Ericsson*

**Discussion:**

Nokia: normative work "seems" to be transparent? It is transparent.

Qualcomm: ley issue for a SA2 document? We don’t need this.

Ericsson: it was in our objectives, in our scope.

**Decision:** The document was **noted**.

**S3-224036 Draft TR 33.858**

*Type: draft TR For: Approval  
 33.858 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **approved**.

### 5.17 Study on Security of Phase 2 for UAS, UAV and UAM

**S3-223355 Proposed key issue on the privacy of 3GPP identifiers used to transport Broadcast Remote ID**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-222754)

**Decision:** The document was **approved**.

**S3-223356 Proposed solution on the privacy of 3GPP identifiers used to transport broadcast remote ID**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-222756)

**Decision:** The document was **approved**.

**S3-223323 Evaluation Solution #4**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **revised to S3-224116**.

**S3-224116 Evaluation Solution #4**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-223323)

**Decision:** The document was **approved**.

**S3-223324 Evaluation Solution #5**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **approved**.

**S3-223357 Proposed resolution of pairing EN in solution #3**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **noted**.

**S3-223358 Proposed resolution of DAA credentials EN in solution #3**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **approved**.

**S3-223879 Update to Solution #2 in UAS**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Lenovo*

**Decision:** The document was **approved**.

**S3-223325 Conclusion TR 33.891 KI #1**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **revised to S3-224117**.

**S3-224117 Conclusion TR 33.891 KI #1**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-223325)

**Decision:** The document was **noted**.

**S3-223466 Add conclusion to KI#1 about Direct C2 security**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223467 Add conclusion to KI#2 about DAA unicast security**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224093**.

**S3-224093 Add conclusion to KI#2 about DAA unicast security**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223467)

**Decision:** The document was **noted**.

**S3-223326 Conclusion TR 33.891 KI #3**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **revised to S3-224118**.

**S3-224118 Conclusion TR 33.891 KI #3**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-223326)

**Decision:** The document was **approved**.

**S3-223327 Conclusion TR 33.891 KI #4**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

**Decision:** The document was **revised to S3-224119**.

**S3-224119 Conclusion TR 33.891 KI #4**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-223327)

**Decision:** The document was **approved**.

**S3-223473 Add conclusion to KI#4 about privacy protection over PC5 link for C2**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223474 Add conclusion to KI#5 about DAA unicast privacy**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224094**.

**S3-224094 Add conclusion to KI#5 about DAA unicast privacy**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223474)

**Decision:** The document was **approved**.

**S3-223468 Add conclusion to KI#6 about Privacy for 3GPP ID in DAA**

*Type: pCR For: Approval  
 33.891 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-224112 Draft TR 33.891**

*Type: draft TR For: Approval  
 33.891 v0.4.0  
 Source: Qualcomm*

**Decision:** The document was **approved**.

### 5.18 Study to enable URSP rules to securely identify Applications

**S3-223799 Proposal for a KI on injection of authentication data**

*Type: pCR For: Approval  
 33.892 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **withdrawn**.

**S3-223222 Evaluation Update of Solution #2**

*Type: pCR For: Approval  
 33.892 v0.3.0  
 Source: Lenovo*

**Decision:** The document was **noted**.

**S3-223550 Updates to evalution of solution 2**

*Type: pCR For: Approval  
 33.892 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223802 Resolution to editor’s note in solution 1 concerning threat mitigation**

*Type: pCR For: Approval  
 33.892 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223803 Resolution to editor’s note in solution 1 concerning the provisioning of security material**

*Type: pCR For: Approval  
 33.892 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223576 Solution on prevention of URSP rule misuse by a non-genuine application using home network anchor**

*Type: pCR For: Approval  
 33.892 v0.3.0  
 Source: Intel*

**Decision:** The document was **revised to S3-224177**.

**S3-224177 Solution on prevention of URSP rule misuse by a non-genuine application using home network anchor**

*Type: pCR For: Approval  
 33.892 v0.3.0  
 Source: Intel*

(Replaces S3-223576)

**Decision:** The document was **approved**.

**S3-223221 Conclusion for KI#1**

*Type: pCR For: Approval  
 33.892 v0.3.0  
 Source: Lenovo*

**Decision:** The document was **noted**.

**S3-224180 Draft TR 33.892**

*Type: draft TR For: Approval  
 33.892 v0.4.0  
 Source: Lenovo*

**Decision:** The document was **approved**.

### 5.19 Study on Security Aspects of Ranging Based Services and Sidelink Positioning

**S3-223289 Ranging - Update Key Issue #1- privacy risks of exposing positioning reference signals**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Philips International B.V.*

**Discussion:**

Quakcomm: postpone this key issue proposal. Ericsson and Xiaomi had the same concerns.

**Decision:** The document was **noted**.

**S3-223531 Addressing the editor's note in sol#1**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Xiaomi: you need to define what is in the configuration or not.This was taken offline.

**Decision:** The document was **revised to S3-223982**.

**S3-223982 Addressing the editor's note in sol#1**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223531)

**Decision:** The document was **approved**.

**S3-223288 Ranging - New solution KI#1, #2, #3**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Philips International B.V.*

**Decision:** The document was **not treated**.

**S3-223752 33.893: New Solution on Security Policy based Protection for Ranging Communication**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **revised to S3-224130**.

**S3-224130 33.893: New Solution on Security Policy based Protection for Ranging Communication**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

(Replaces S3-223752)

**Decision:** The document was **approved**.

**S3-223753 33.893: New Solution on Security Policy based Protection for Ranging Result sent to SL Positioning Client UE**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Discussion:**

Qualcomm: more time to analyze according to SA2's solutions.An editor's note was added.

**Decision:** The document was **revised to S3-224131**.

**S3-224131 33.893: New Solution on Security Policy based Protection for Ranging Result sent to SL Positioning Client UE**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

(Replaces S3-223753)

**Decision:** The document was **approved**.

**S3-223746 33.893: Additional Roles for Authorization in KI#2**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **revised to S3-224128**.

**S3-224128 33.893: Additional Roles for Authorization in KI#2**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

(Replaces S3-223746)

**Decision:** The document was **approved**.

**S3-223748 33.893: Resolve the Editor’s Notes in Solution #2**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Discussion:**

Huawei: UE not reachable, how to notify it?

**Decision:** The document was **approved**.

**S3-223532 Adding an editor's note to sol#3**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223749 33.893: Resolve the Editor’s Note in Solution #4**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **not treated**.

**S3-223750 33.893: Evaluation for Solution #4**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **not treated**.

**S3-223754 33.893: New Solution on Authorization of SL Positioning Client UE for Obtaining Ranging Result**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **not treated**.

**S3-223756 33.893: New Solution on Role Verification during Discovery based on Discovery Keys**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **not treated**.

**S3-223755 33.893: New Solution on Token-based Authorization of the Role of the UE during Discovery**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **not treated**.

**S3-223630 New solution with authorization tokens exchanged after PC5 security establishment**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223465 New solution of security for the Ranging SL positioning device discovery**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223767 New solution on Ranging/SL Positioning discovery and link establishment procedure for V2X capable UEs**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

**Decision:** The document was **not treated**.

**S3-223747 33.893: Update to Key Issue #4**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **approved**.

**S3-223402 Update to solution#6 in TR 33.893 - add authorization check step**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: China Telecom Corporation Ltd.*

**Decision:** The document was **not treated**.

**S3-223403 Update to solution#6 in TR 33.893 - SLPK ID usage**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: China Telecom Corporation Ltd.*

**Decision:** The document was **not treated**.

**S3-223751 33.893: Evaluation for Solution #6**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **not treated**.

**S3-223464 New solution for protecting direct communnication**

*Type: pCR For: Approval  
 33.893 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**S3-223230 New Key issue for Detecting ranging triggered DoS attacks**

*Type: pCR For: (not specified)  
 33.893 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-224129 Draft TR 33.893**

*Type: draft TR For: Approval  
 33.893 v0.4.0  
 Source: Xiaomi*

**Decision:** The document was **approved**.

### 5.20 Study on Security and Privacy of AI/ML-based Services and Applications in 5G

**S3-223249 Update Annex A**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: OPPO, Xidian*

**Decision:** The document was **approved**.

**S3-223250 Key issue on user consent for FL UE members**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: OPPO, Nokia, Nokia Shanghai Bell, Inter Digital*

**Discussion:**

Apple: agree with key issue, but we would like to reword the first requirement.

Qualcomm didn’t agree with this contribution. There is another key issue on this already. User consent is part of privacy.

Ericsson agreed with Qualcomm.

Qualcomm: we need to wait for SA2 what purpose this is for to understand better the issue. We may not need user consent.

OPPO: the SA2 study on this is clear, we understand that user consent is necessary.

Nokia: SA2 has an editor's note referring to SA3 user consent in TR 23.800-70, clause 8.3.

This was taken offline.

**Decision:** The document was **noted**.

**S3-223444 New KI - User consent for application layer AIML operation**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: ZTE Corporation*

**Discussion:**

Qualcomm: key issue#3 may not go anywhere in SA2 as I got from my colleague in that WG. We need more analysis as we are not sure if user consent is needed. This key issue is not needed.

Nokia: something needs to be studied in SA3, we should prepare something.

Qualcomm: come back with use cases and then we can discuss whether this is needed.

There were discussions on whether an LS was needed to ask SA2 and Interdigital stated that this would delay progress a bit deal; a show of hands could solve the issue.

**Decision:** The document was **noted**.

**S3-223224 Discussion paper on 5GC AIML system capability**

*Type: discussion For: Approval  
 Source: InterDigital Communications*

**Abstract:**

Discussion on 3GPP system 5GC AIML infrastructure need to provide means to protect AIML operation.

**Discussion:**

Ericsson: this is not what SA2 is doing. This is impossible to be addressed by us. We are not the right group, this is not a federated learning security group.

Qualcomm also had their issues with this.

**Decision:** The document was **noted**.

**S3-223226 New key issue on Federated Learning AIML model protection**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: InterDigital Communications*

**Decision:** The document was **not treated**.

**S3-223225 New key issue on Federated Learning AIML model privacy protection**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: InterDigital Communications*

**Decision:** The document was **not treated**.

**S3-223275 Key issue on Security criteria of UE selection for AIML**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell, Inter Digital*

**Discussion:**

Ericsson: this is out of scope of our work.

Qualcomm: irrelevant from security point of view.

**Decision:** The document was **noted**.

**S3-223480 New Solution reusing exisiting mechanism for privacy protection for 5GC assistance information exposure to AF**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223481 New Solution reusing existing mechanism for authorization of 5GC assistance information exposure to AF**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-223980**.

**S3-223980 New Solution reusing existing mechanism for authorization of 5GC assistance information exposure to AF**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223481)

**Decision:** The document was **approved**.

**S3-223783 KI #1, New Sol on UE profile based 5GC assistance information exposure authorization**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: Xiaomi Communication*

**Decision:** The document was **revised to S3-223981**.

**S3-223981 KI #1, New Sol on UE profile based 5GC assistance information exposure authorization**

*Type: pCR For: Approval  
 33.898 v0.2.0  
 Source: Xiaomi Communication*

(Replaces S3-223783)

**Discussion:**

Adding editor's notes.

**Decision:** The document was **approved**.

**S3-223978 Draft TR 33.898**

*Type: draft TR For: Approval  
 33.898 v0.3.0  
 Source: OPPO*

**Decision:** The document was **approved**.

**S3-223979 LS on clarification for user consent for AI/ML**

*Type: LS out For: Approval  
 to SA2  
 Source: Huawei*

**Decision:** The document was **noted**.

5.21 Study on applicability of the Zero Trust Security principles in mobile networks

**S3-223396 New KI: Maturity model for ZTS in 5GC**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: MITRE Corporation, US National Security Agency*

**Abstract:**

This proposal KI sets out to define a maturity model for attaining a ZTA in 5GC.

**Decision:** The document was **noted**.

**S3-223397 New KI: MFA for NF in 5GC**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: MITRE Corporation*

**Abstract:**

This Key Issue proposal aims to study solutions that enhance NF authentication in the 5GC for both Service Based Interface (SBI) and non-service-based interfaces.

**Decision:** The document was **noted**.

**S3-223863 Key Issue #1 Update**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Lenovo, Nokia, Nokia Shanghai Bell, Rakuten Mobile Inc., Interdigital, US National Security Agency, Motorola Solutions, Johns Hopkins University APL, Intel, Center for Internet Security, China Mobile, ZTE, CableLabs, China Telecom, Verizon, Convida Wirele*

**Decision:** The document was **revised to S3-224031**.

**S3-224031 Key Issue #1 Update**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Lenovo, Nokia, Nokia Shanghai Bell, Rakuten Mobile Inc., Interdigital, US National Security Agency, Motorola Solutions, Johns Hopkins University APL, Intel, Center for Internet Security, China Mobile, ZTE, CableLabs, China Telecom, Verizon, Convida Wirele*

(Replaces S3-223863)

**Decision:** The document was **approved**.

**S3-223408 Clarify authorization to non-SBA interfaces**

*Type: pCR For: (not specified)  
 33.894 v0.3.0  
 Source: China Telecommunications*

**Decision:** The document was **noted**.

**S3-223536 Evaluation of tenet 4 on resource access**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-224125 Evaluation of tenet 4 on resource access**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

**S3-223865 Update to Tenet #5**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Lenovo, US National Security Agency, Charter Communications*

**Discussion:**

Ericsson: last line doesn’t have the full picture.

Huawei added some comments and this document was revised.

**Decision:** The document was **revised to S3-224127**.

**S3-224127 Update to Tenet #5**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Lenovo, US National Security Agency, Charter Communications*

(Replaces S3-223865)

**Decision:** The document was **noted**.

**S3-223866 Update to Tenet #6**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Lenovo, US National Security Agency, Charter Communications*

**Decision:** The document was **noted**.

**S3-223538 Updates to evaluation of tenet 6**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Vodafone: not a critical evaluation and the added paragraph looks like a conclusion, not an evaluation.

Ericsson preferred this option to the one in 866.

**Decision:** The document was **noted**.

**S3-223868 Update to Tenet #7**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Lenovo, US National Security Agency, Charter Communications*

**Decision:** The document was **revised to S3-224126**.

**S3-224126 Update to Tenet #7**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Lenovo, US National Security Agency, Charter Communications*

(Replaces S3-223868)

**Decision:** The document was **approved**.

**S3-223539 Updates to evaluation of tenet 7**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223864 Editorial Update for TR 33.894**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Lenovo*

**Decision:** The document was **approved**.

**S3-223537 Update**

*Type: pCR For: Approval  
 33.894 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

**S3-224162 Draft TR 33.894**

*Type: draft TR For: Approval  
 33.894 v0.4.0  
 Source: Lenovo*

**Decision:** The document was **approved**.

### 5.22 Study of Security aspects on User Consent for 3GPP Services Phase 2

**S3-223231 New key issue on enhancement of user consent for using MDT for NG-RAN AI/ML**

*Type: pCR For: (not specified)  
 33.896 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-224113 New key issue on enhancement of user consent for using MDT for NG-RAN AI/ML**

*Type: pCR For: -  
 33.896 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **withdrawn**.

**S3-223395 33.896: Updates to Key Issue on User Consent for NTN**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Google Inc.*

**Abstract:**

This contribution proposes potential security requirements for user consent for NTN.

**Decision:** The document was **merged**.

**S3-223483 Key Issue Update on User Consent for NTN**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Huawei, HiSilicon, Philips International B.V., Xiaomi, Qualcomm, Apple*

**Discussion:**

Google, Broadcom: quite a lot of discussions on user consent in RAN groups about this, we need to consider it.

Apple: we had quite a few LS on user consent, this key issue is needed. Every LS is a use case.

Huawei: basic procedure is the one in defined in Rel-15. After that it is not the basic procedure.

Huawei: other groups are waiting for our feedback on user consent since long time ago.

**Decision:** The document was **revised to S3-224090**.

**S3-224090 Key Issue Update on User Consent for NTN**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Huawei, HiSilicon, Philips International B.V., Xiaomi, Qualcomm, Apple*

(Replaces S3-223483)

**Discussion:**

Qualcomm didn’t agree with the changes and wanted out of the sourcing companies.Apple didn’t agree with the changes either.

Vodafone and Ericsson objected to the contribution.

**Decision:** The document was **noted**.

**S3-223484 New solution on User Consent Architecture for RAN as enforcement point**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223485 Overview of UC3S\_Ph2**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224091**.

**S3-224091 Overview of UC3S\_Ph2**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223485)

**Decision:** The document was **approved**.

**S3-223486 Conclusion for key issue #1**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223562 Guidance for Enforcing User Consent**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224092**.

**S3-224092 Guidance for Enforcing User Consent**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223562)

**Decision:** The document was **approved**.

**S3-223565 Conclusion for key issue #2**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223566 LS on User Consent for Roaming**

*Type: LS out For: (not specified)  
 to SA2, cc SA6, RAN2, RAN3  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223635 Central authorization for user consent handling**

*Type: pCR For: (not specified)  
 33.896 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-223639 KI and Solution on user consent in roaming**

*Type: pCR For: (not specified)  
 33.896 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223757 33.896: Update to Solution #1**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **approved**.

**S3-223758 33.896: Update to Solution #2**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **approved**.

**S3-223759 33.896: Solution on Obtaining User Consent with Mobility in RAN for KI#2**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **noted**.

**S3-223760 33.896: Solution on Obtaining User Consent with Mobility in SN for KI#2**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Xiaomi Technology*

**Decision:** The document was **noted**.

**S3-223770 New solution on User Consent for UE Data Exposure to HPLMN in the Roaming case**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

**Decision:** The document was **approved**.

**S3-223771 New solution on User Consent for UE Data Exposure to VPLMN in the Roaming case**

*Type: pCR For: Approval  
 33.896 v0.3.0  
 Source: Beijing Xiaomi Mobile Software*

**Decision:** The document was **approved**.

**S3-224181 Draft TR 33.896**

*Type: draft TR For: Approval  
 33.896 v0.4.0  
 Source: Huawei*

**Decision:** The document was **approved**.

### 5.23 Study on security enhancements for 5G multicast-broadcast services Phase 2

**S3-223234 TMGI protection during group Paging**

*Type: pCR For: (not specified)  
 33.883 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223235 LS on MOCN TMGI ID impacting MSK, MTK**

*Type: LS out For: (not specified)  
 to SA2  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223236 EN removal for MOCN solution#2**

*Type: pCR For: (not specified)  
 33.883 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223524 Editorial change to TR 33.883**

*Type: pCR For: Approval  
 33.883 v0.3.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **approved**.

**S3-223525 A new solution on MOCN network sharing scenario**

*Type: pCR For: Approval  
 33.883 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Samsung: this is not acceptable from our perspective.

Ericsson: this would work if security application layer is enabled.

**Decision:** The document was **revised to S3-224182**.

**S3-224182 A new solution on MOCN network sharing scenario**

*Type: pCR For: Approval  
 33.883 v0.3.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223525)

**Decision:** The document was **approved**.

**S3-223526 A new solution on TMGI protection**

*Type: pCR For: Approval  
 33.883 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson and Qualcomm had issues with this contribution.

**Decision:** The document was **noted**.

**S3-223736 [MBS] Updates to solution#1 in TR 33.883**

*Type: pCR For: Approval  
 33.883 v0.3.0  
 Source: Samsung*

**Discussion:**

Ericsson: how is MTK distributed? MIKEY used here? If so the solution is not workable.

Samssung: no mechanism proposed for the distribution of MTK.

**Decision:** The document was **noted**.

**S3-223737 [MBS] Conclusion for Key Issue#1**

*Type: pCR For: Approval  
 33.883 v0.3.0  
 Source: Samsung*

**Decision:** The document was **noted**.

**S3-224120 Draft TR 33.883**

*Type: draft TR For: Approval  
 33.883 v0.4.0  
 Source: Huawei*

**Decision:** The document was **approved**.

### 5.24 Study on enhanced Security Aspects of the 5G Service Based Architecture

**S3-223710 Trust in service mesh and standalone SCP implementations**

*Type: pCR For: (not specified)  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

Ericsson didn’t agree on the standalone SCP statement in the last sentence.

Nokia: level of trust for co-located SCPs is described already.

**Decision:** The document was **revised to S3-224183**.

**S3-224183 Trust in service mesh and standalone SCP implementations**

*Type: pCR For: -  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223710)

**Decision:** The document was **approved**.

**S3-223712 Trust in inter-PLMN communication**

*Type: pCR For: (not specified)  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-223882 Resolving ENs in solution 6.13**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: CableLabs*

**Discussion:**

There was disagreement on the removal of the editor's notes. Ths was taken offline.

**Decision:** The document was **noted**.

**S3-223239 Further Analysis for KI#1 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Decision:** The document was **noted**.

**S3-223240 Conclusion on KI#1 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Decision:** The document was **revised to S3-223984**.

**S3-223984 Conclusion on KI#1 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir,Nokia,Huawei*

(Replaces S3-223240)

**Decision:** The document was **approved**.

**S3-223592 Conclusion on KI#1**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223713 Conclusion on KI1**

*Type: pCR For: (not specified)  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **merged**.

**S3-223714 KI3 update Subscribe-Notify – EN resolution**

*Type: pCR For: (not specified)  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-223985**.

**S3-223985 KI3 update Subscribe-Notify – EN resolution**

*Type: pCR For: -  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell, Ericsson, Huaweil*

(Replaces S3-223714)

**Decision:** The document was **approved**.

**S3-223596 Removing EN in KI#3**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223695 Update of Key Issue #3: Service access authorization in the "Subscribe-Notify" scenarios**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Ericsson*

**Discussion:**

Nokia: this is rewriting the whole key issue, we can't spend time on this.

Ericsson: we never agreed on threats and requirements, hence this.

Nokia: let's not pursue any normative work for this release. This was supported by CableLabs.

**Decision:** The document was **merged**.

**S3-223741 KI4 Sol SCP authorization check by NRF**

*Type: pCR For: Approval  
 33.875 v1.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-222809)

**Decision:** The document was **revised to S3-224070**.

**S3-224070 KI4 Sol SCP authorization check by NRF**

*Type: pCR For: Approval  
 33.875 v1.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223741)

**Decision:** The document was **approved**.

**S3-223241 Further Analysis for KI#4 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Discussion:**

CableLabs: it doesn’t address any editor's notes. We just need the conclusion.

**Decision:** The document was **revised to S3-223988**.

**S3-223988 Further Analysis for KI#4 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir,Nokia, Nokia Shanghai Bell*

(Replaces S3-223241)

**Decision:** The document was **approved**.

**S3-223242 Conclusion for KI#4 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Decision:** The document was **revised to S3-223989**.

**S3-223989 Conclusion for KI#4 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir,Nokia, Nokia Shanghai Bell*

(Replaces S3-223242)

**Discussion:**

It was asked to be minuted: SCP requirements may need an update to ensure that existing security requirements apply to all interfaces from SCP to other entities in the core network,

**Decision:** The document was **approved**.

**S3-223861 Resolving ENs in solution 6.16**

*Type: pCR For: Approval  
 33.875 v1.3.0  
 Source: CableLabs*

**Discussion:**

Ericsson proposed an editor's note as a consequence of this proposal.

**Decision:** The document was **revised to S3-224099**.

**S3-224099 Resolving ENs in solution 6.16**

*Type: pCR For: Approval  
 33.875 v1.3.0  
 Source: CableLabs*

(Replaces S3-223861)

**Decision:** The document was **approved**.

**S3-223243 Further Analysis for KI#5 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Decision:** The document was **noted**.

**S3-223244 Conclusion on KI#5 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Discussion:**

MCC commented that the TR needed a cleanup to get rid of references to tdocs, WG's decisions and so on and stick to references to 3GPP specifications instead.

**Decision:** The document was **revised to S3-224100**.

**S3-224100 Conclusion on KI#5 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

(Replaces S3-223244)

**Decision:** The document was **approved**.

**S3-223849 EN deletion in KI5**

*Type: pCR For: (not specified)  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **merged**.

**S3-223245 Further Analysis for KI#6 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Decision:** The document was **noted**.

**S3-223246 Conclusion for KI#6 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Decision:** The document was **revised to S3-224102**.

**S3-224102 Conclusion for KI#6 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

(Replaces S3-223246)

**Decision:** The document was **approved**.

**S3-223593 Solution for authorization negotiation with bootstrapping mechanism**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

Nokia: No problem with this but the conclusion is not agreable.

**Decision:** The document was **approved**.

**S3-223594 Conclution on KI#7**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224104**.

**S3-224104 Conclution on KI#7**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-223594)

**Decision:** The document was **approved**.

**S3-223595 LS on authorization negotiation**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223797 KI9 update to sol17 on authorization mechanism negotiation**

*Type: pCR For: (not specified)  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-224107 KI9 update to sol17 on authorization mechanism negotiation**

*Type: pCR For: -  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **withdrawn**.

**S3-223850 pCR to 33.875 - Update of Key Issue 10**

*Type: pCR For: Agreement  
 33.875 v1.4.0  
 Source: Vodafone España SA*

**Decision:** The document was **revised to S3-224111**.

**S3-224111 pCR to 33.875 - Update of Key Issue 10**

*Type: pCR For: Agreement  
 33.875 v1.4.0  
 Source: Vodafone España SA,Nokia, Nokia Shanghai Bell*

(Replaces S3-223850)

**Decision:** The document was **approved**.

**S3-223798 KI10 solution on N32 security profiles**

*Type: pCR For: (not specified)  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-224108**.

**S3-224108 KI10 solution on N32 security profiles**

*Type: pCR For: -  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223798)

**Decision:** The document was **approved**.

**S3-223328 Resolving Editor’s Note in Solution #20 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Decision:** The document was **revised to S3-224110**.

**S3-224110 Resolving Editor’s Note in Solution #20 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

(Replaces S3-223328)

**Decision:** The document was **approved**.

**S3-223855 KI11 threat clarification**

*Type: pCR For: (not specified)  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

**S3-223696 Evaluation for Solution #21 "Certificate solution for NRF validation of NFc for access token requests"**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223697 Evaluation and update for Solution #22 "Combined certificate and profile solution for NRF validation of NFc for access token requests"**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223329 Analysis for KI#11 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Decision:** The document was **not treated**.

**S3-223330 Conclusion on KI#11 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir*

**Decision:** The document was **revised to S3-223990**.

**S3-223990 Solution on KI#11 in TR 33.875**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Mavenir,Nokia, Nokia Shanghai Bell*

(Replaces S3-223330)

**Decision:** The document was **approved**.

**S3-223888 pCR to 33.875 - Update to Key Issue 13**

*Type: pCR For: Agreement  
 33.875 v1.4.0  
 Source: Vodafone España SA*

**Decision:** The document was **not treated**.

**S3-223698 Discussion. Key issue #12: Security in Hosted SEPP scenarios**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223699 Update of Key issue #12: Security in Hosted SEPP scenarios**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223700 Solution for KI#12: Security in Hosted SEPP scenarios**

*Type: pCR For: Approval  
 33.875 v1.4.0  
 Source: Ericsson*

**Decision:** The document was **not treated**.

**S3-223869 TR rapporteur updates - editorials**

*Type: pCR For: (not specified)  
 33.875 v1.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **approved**.

**S3-223983 Draft TR 33.875**

*Type: draft TR For: Approval  
 33.875 v1.5.0  
 Source: Nokia*

**Decision:** The document was **approved**.

### 5.25 Study on Security Aspects of Satellite Access

**S3-223405 Update KI #1 Protection of Satellite Coverage Information used by 5GC/EPC**

*Type: pCR For: Approval  
 33.700-28 v0.1.0  
 Source: China Telecom Corporation Ltd.*

**Decision:** The document was **merged**.

**S3-223523 update to key issue 1**

*Type: pCR For: Approval  
 33.700-28 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **merged**.

**S3-223761 33.700-28: Update to Key Issue #1**

*Type: pCR For: Approval  
 33.700-28 v0.1.0  
 Source: Xiaomi Technology*

**Decision:** The document was **revised to S3-224072**.

**S3-224072 33.700-28: Update to Key Issue #1**

*Type: pCR For: Approval  
 33.700-28 v0.1.0  
 Source: Xiaomi Technology*

(Replaces S3-223761)

**Decision:** The document was **approved**.

**S3-223232 Key Issue for Secure RRC connection setup procedure**

*Type: pCR For: (not specified)  
 33.700-28 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **noted**.

**S3-223762 33.700-28: New Key Issue on Protection of UE Unreachability Period retrieved by the UE**

*Type: pCR For: Approval  
 33.700-28 v0.1.0  
 Source: Xiaomi Technology*

**Decision:** The document was **noted**.

**S3-224166 Draft TR 33.700-28**

*Type: draft TR For: Approval  
 33.700-28 v0.2.0  
 Source: Xiaomi*

**Decision:** The document was **approved**.

## 6 New Study/Work item proposals

**S3-223211 Discussion paper on open questions regarding 256-bit algorithms**

*Type: discussion For: Endorsement  
 Source: KDDI Corporation*

**Decision:** The document was **withdrawn**.

**S3-223212 Study on enabling a cryptographic algorithm transition to 256 bits**

*Type: SID new For: Approval  
 Source: KDDI Corporation*

**Decision:** The document was **withdrawn**.

**S3-223220 New SID on QUICK optimization for access traffic steering, switching and splitting support in the 5G system architecture; Phase 3**

*Type: SID new For: Approval  
 Source: Lenovo*

**Discussion:**

KDDI: not critical, no need to do this now.

Google: SA2 has decided already to use this. Acronym is wrong: QUIC.

Interdigital supported this SID.

Nokia: this should be a "quick" study.

China Mobile supported this SID.

NIST: this is not the place to work on an IETF protocol.

Keysight supported this SID.

Qualcomm: if we go forward this would be about using TLS or not.

CableLabs: true that we shouldn’t interfere with the IETF security protection.

The Chair asked if SA3 had the bandwith to add another SID in the SA3 workload.

Ericsson: performance decrease that bad? It should be interesting to know.

**Decision:** The document was **noted**.

**S3-223251 Discussion on Ambient IoT Security**

*Type: discussion For: Endorsement  
 Source: OPPO*

**Discussion:**

KDDI: very early in the process, too unspecific as we wouldn’t know what to endorse here.

Interdigital found this paper reasonable.

Qualcomm mentioned that SA3 was a better place for the definition of security requirements.

**Decision:** The document was **noted**.

**S3-223445 DTLS for AKMA WID**

*Type: WID new For: Approval  
 Source: ZTE Corporation*

**Discussion:**

Thales: add previous GBA work in the related work items.

Qualcomm: add TS 33.222 as impacted specification.

**Decision:** The document was **revised to S3-223959**.

**S3-223959 DTLS for AKMA WID**

*Type: WID new For: Approval  
 Source: ZTE Corporation*

(Replaces S3-223445)

**Decision:** The document was **agreed**.

**S3-223487 New WID on UC3S\_Ph2**

*Type: WID new For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

NTT-Docomo: let's wait for the conclusions of the study. KDDI, Qualcomm and Google agreed to wait for another meeting cycle.

**Decision:** The document was **noted**.

**S3-223504 New WID on HONTRA**

*Type: WID new For: Approval  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-224173**.

**S3-224173 New WID on HONTRA**

*Type: WID new For: Approval  
 Source: Huawei, HiSilicon*

(Replaces S3-223504)

**Decision:** The document was **agreed**.

**S3-223534 New WID on security assurance methodology enhancements**

*Type: WID new For: Agreement  
 Source: Huawei, HiSilicon*

**Decision:** The document was **noted**.

**S3-223568 New SID on 5G Per-QoS Flow User Plane Security Control**

*Type: SID new For: Approval  
 Source: Intel, Samsung*

**Discussion:**

KDDI: no time to do optimizations. Not sure this is going to be a mini WID either.

Qualcomm objected to this. It introduces a lot of complexity.

Ericsson also objected to this.

Interdigital: why more complex? It looks like you have a solution in mind.

NTT-Docomo: privacy for IP address in this case?

Intel: we can limit the objectives to make the work shorter.

Huawei: it's obvious that it has a significant impact on the system.

ORANGE: don’t push for this study unless we have some requirement from SA2. Workload in SA3 is high.

Qualcomm objected to this due to security reasons and system complexity introduced with this mechanism.

Intel didn’t see any security aspects.

ORANGE didn’agree with point 2.

**Decision:** The document was **noted**.

**S3-223569 SCAS process enhancements**

*Type: CR For: (not specified)  
 33.916 v17.0.0 CR-0011 Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

Ericsson: remove the changes on the skeleton.

MCC commented that this meant an exception in the 3GPP drafting rules.They added that some text didn’t really belong to a specification but an internal SA3 guideline that could be maintained.

Qualcomm: instead of going one Release after, why not we give several months for SCAS to finish and avoid this previous Release reference?

It was agreed to start discussions with MCC and come back in the next meeting with an updated proposal.

**Decision:** The document was **not pursued**.

**S3-223570 Need for Rel-18 study on UP security enhancement**

*Type: discussion For: (not specified)  
 Source: Intel, Samsung*

**Decision:** The document was **noted**.

**S3-223589 New WID on Security Aspects of Enhancement of Support for Edge Computing in 5GC — phase 2**

*Type: WID new For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

Docomo: wait for the TR conclusion.

Ericsson supported this WID.

OPPO: start work on a draft CR and come back with the WID when it's done.

Nokia supported the WID.

Qualcomm: we can't keep revising the WID every meeting. I like OPPO's proposal.

**Decision:** The document was **noted**.

**S3-223673 New WID on Security Aspects of Proximity-based Services in 5GS Phase 2**

*Type: WID new For: Approval  
 Source: CATT*

**Decision:** The document was **noted**.

**S3-223701 New WID on Security aspects of enhanced support of Non-Public Networks phase 2**

*Type: WID new For: Agreement  
 Source: Ericsson*

**Discussion:**

Agreed that it was too early to bring this.

**Decision:** The document was **noted**.

**S3-223829 WID on SBA security**

*Type: WID new For: (not specified)  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-222254)

**Discussion:**

Huawei: reword the objectives so as not to mention key issues.

It was commented that the TR hadn’t finished yet so the objectives were complete.

Mavenir: add more conclusions to the WID with a revised WID later.

**Decision:** The document was **revised to S3-224087**.

**S3-224087 WID on SBA security**

*Type: WID new For: -  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-223829)

**Decision:** The document was **agreed**.

**S3-223834 New WID on IETF OSCORE protocol profiles for GBA and AKMA**

*Type: WID new For: Agreement  
 Source: Ericsson*

**Discussion:**

Thales: add TS 33.222 as impacted speciification.

**Decision:** The document was **revised to S3-224132**.

**S3-224132 New WID on IETF OSCORE protocol profiles for GBA and AKMA**

*Type: WID new For: Agreement  
 Source: Ericsson*

(Replaces S3-223834)

**Decision:** The document was **agreed**.

## 7 CVD and research

**S3-223158 Research highlighting potential need for granular level checks using ""Additional scope"" under the OAuth2.0 Token Access.**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: GSMA*

**Discussion:**

Nokia: the document admits already that this is very unlikely.

CableLabs: postpone to review this.

**Decision:** The document was **postponed**.

## 8 Any Other Business

Alf (NTT Docomo) was given the 2020 3GPP Award for his contributions to SA3 standards. This had been unfortunately delayed due to the Pandemic.

ENISA gave a presentation on the EU certification scheme work where they searched to engage with 3GPP and work together for EU5G needs to be addressed.

Alex (BT): scheme going live in 2024 (Rel-16 early Rel-17 network implementations). Is the expectation that stuff entering the market will need to comply in that time schale? Can we agree on which release would be affected?

ENISA: we are open to discuss the implementation time scales wuthout disrupting the work in 3GPP.

The Chair asked if ENISA would attend 3GPP meetings in the future as a member. ENISA replied that the technical knowledge may not be as high but they answered that this could be possible.

ENISA: our relatuionship would be more technical.

ORANGE: maybe Releases are irrelevant. Just take the release that is deployed effectively.

ENISA: we need a common evaluation methodology, but it is linked to the releases.WE expect that the releases will be part of the references in the scheme, not only NESAS is involved.

ORANGE: you will need to update references every time we update the specifications.

Huawei: to bring CRs to TS 33.117 is the plan? Then bring them as soon as possible, as it will take a few iterations to reach consensus.

China Mobile: do you plan to add requirements in the 3GPP specifications? This would affect not only Europe but the rest of the World.

ENISA: not our plan, we are just an EU scheme.

Mavenir: changes in Release 17 but most operators comply to Release 16. Do you plan to come in the picture in Release 17? ENISA replied yes.

Vodafone: it's important to have requirements brought before the test bed.

BT: most of the gaps will address security gaps that affect other countries outside EU. I expect requirements in TS 33.501 coming from the operators.Set up some form SA3 SWG with the task to have a look at this exclusively and come back to the plenary with CRs. Next meeting is in Athens, where ENISA is based, so we could organise some work in there as well.

Apple: we agree that there are security gaps that can be addressed but the requirements should be discussed at SA3 level. Will this work cover only network equipment or also UE? ENISA replied that only network equipment would be affected. They welcomed the idea to meet in Athens and clarified what the gaps were about. This wasn’t about trakcing technical specs but mainly about government structure issues that needed to be solved.

Qualcomm: it depends on what type of requirement, we may require a separate specification.

ENISA commented that the gaps document would be shared with 3GPP after the 21st of November.

**S3-223146 SA3 meeting calendar**

*Type: other For: (not specified)  
 Source: SA WG3 Chair*

**Decision:** The document was **revised to S3-224105**.

**S3-224105 SA3 meeting calendar**

*Type: other For: -  
 Source: SA WG3 Chair*

(Replaces S3-223146)

**Decision:** The document was **noted**.

**S3-223952 Presentation from ENISA on EU certification scheme**

*Type: other For: Presentation  
 Source: ENISA*

**Decision:** The document was **noted**.

## Annex A: Contribution documents and status

### A1: List of TDocs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Document | Title | Source | Decision | Replaces | Replaced by |
| S3-223140 | Agenda | SA WG3 Chair | approved |  |  |
| S3-223141 | Report from SA3#108e | MCC | approved |  |  |
| S3-223142 | Report for SA3#108e ad-Hoc | SA WG3 Chair | approved |  |  |
| S3-223143 | Process for SA3#109 | SA WG3 Chair | noted |  |  |
| S3-223144 | Report from last SA | SA WG3 Chair | noted |  |  |
| S3-223145 | Process and agenda planning for SA3#109 | SA WG3 Chair | noted |  |  |
| S3-223146 | SA3 meeting calendar | SA WG3 Chair | revised |  | S3-224105 |
| S3-223147 | 5G capabilities exposure for factories of the future - identified gaps | 5G-ACIA | postponed |  |  |
| S3-223148 | LS on clarification for UE\_NOT\_FOUND cause code for UP in CT1 | C1-226279 | replied to |  |  |
| S3-223149 | LS on user’s consent for EDGEAPP | C3-223780 | replied to |  |  |
| S3-223150 | LS on anonymous user access to an AF | C3-224730 | replied to |  |  |
| S3-223151 | LS on Authentication Result Removal | C4-224418 | postponed |  |  |
| S3-223152 | Reply LS on PLMN ID used in Roaming Scenarios | C4-224444 | postponed |  |  |
| S3-223153 | Reply LS on handling of the modification policy in the IPX and receiving SEPP | C4-224467 | noted |  |  |
| S3-223154 | LS on Indication of Network Assisted Positioning method | C4-224626 | noted |  |  |
| S3-223155 | Reply LS on Facilitating roaming adoption across 3GPP NPN deployments | C6-220475 | noted |  |  |
| S3-223156 | Completion of SGP.22 v3.0 | GSMA | noted |  |  |
| S3-223157 | LS to 3GPP - Hosted SEPP | GSMA | replied to |  |  |
| S3-223158 | Research highlighting potential need for granular level checks using ""Additional scope"" under the OAuth2.0 Token Access. | GSMA | postponed |  |  |
| S3-223159 | Re-use of CAPIF by ETSI MEC | ETSI ISG MEC | noted |  |  |
| S3-223160 | Reply LS on null security algorithm | R2-2208832 | noted |  |  |
| S3-223161 | Reply LS on authenticity and replay protection of system information | R2-2208985 | postponed |  |  |
| S3-223162 | Reply LS on the user consent for trace reporting | R3-225250 | postponed |  |  |
| S3-223163 | LS on user consent of Non-public Network | R3-226006 | postponed |  |  |
| S3-223164 | Reply LS on Security architecture for 5G multicast/broadcast services | S2-2207390 | replied to |  |  |
| S3-223165 | Reply LS On PLMN ID used in Roaming Scenarios | S2-2207391 | postponed |  |  |
| S3-223166 | LS on protection of the URSP rules from HPLMN | S2-2207501 | replied to |  |  |
| S3-223167 | Reply LS on Inter-PLMN Handover of VoLTE calls and idle mode mobility of IMS sessions | S2-2207697 | noted |  |  |
| S3-223168 | Questions for SUCI protection requirements for non-3GPP (WLAN) access to SNPN | S2-2207700 | replied to |  |  |
| S3-223169 | LS Reply on EAC Mode for NSAC | S2-2209260 | noted |  |  |
| S3-223170 | Response LS on Identifier availability for Lawful Interception during Inter-PLMN handover | S2-2209262 | noted |  |  |
| S3-223171 | Response LS on Clarifications for AF specific UE ID retrieval | S2-2209270 | noted |  |  |
| S3-223172 | Reply LS on the impact of MSK update on MBS multicast session update procedure | S2-2209287 | postponed |  |  |
| S3-223173 | LS on impact of URSP rule enforcement report to 5GC | S2-2209327 | postponed |  |  |
| S3-223174 | LS on Satellite coverage data transfer to a UE using UP versus CP | S2-2209684 | noted |  |  |
| S3-223175 | Progress and open issues for NPN enhancements in Rel-18 | S2-2209860 | replied to |  |  |
| S3-223176 | LS on Time Synchronization Status notification towards UE(s) | S2-2209876 | postponed |  |  |
| S3-223177 | Reply LS on User plane solution for 5GC information exposure to UE | S2-2209910 | noted |  |  |
| S3-223178 | LS on User consent for Application Detection | S2-2209973 | replied to |  | - |
| S3-223179 | Reply LS on User Consent Updating | S5-225321 | noted |  |  |
| S3-223180 | Forward on S6-222332, LS on Network federation interface for Telco edge consideration | S6-222543 | replied to |  |  |
| S3-223181 | Reply LS on user’s consent for EDGEAPP | S6-222555 | noted |  |  |
| S3-223182 | LS on new work item X.5Gsec-ctrl: Security controls for operation and maintenance of 5G network systems | ITU-T SG17 | noted |  |  |
| S3-223183 | Reply LS on Facilitating roaming adoption across 3GPP NPN deployments | SP-220985 | noted |  |  |
| S3-223184 | LS from NG to 3GPP SA3 on IMS Data Channel Security Mode | GSMA | replied to |  |  |
| S3-223185 | Facilitating roaming adoption across 3GPP NPN deployment | WBA | noted |  |  |
| S3-223186 | [33.180] R18 MC client clarification | Motorola Solutions Danmark A/S | withdrawn |  |  |
| S3-223187 | Clarification of hashing | BSI (DE) | not pursued |  |  |
| S3-223188 | Clarification of authorization verification | BSI (DE) | not pursued |  |  |
| S3-223189 | Clarification of brute force mitigation mechanism verification | BSI (DE) | not pursued |  | - |
| S3-223190 | Clarification of privilege escalation methods to check for | BSI (DE) | not pursued |  | - |
| S3-223191 | Clarification of service reachability restriction verification | BSI (DE) | not pursued |  | - |
| S3-223192 | Clarification of auto-launch verification | BSI (DE) | not pursued |  |  |
| S3-223193 | Clarification of SYN Flood attack prevention test | BSI (DE) | not pursued |  |  |
| S3-223194 | Clarification of privilege verification | BSI (DE) | not pursued |  |  |
| S3-223195 | Reply LS on Re-use of CAPIF by ETSI MEC | S6-223027 | noted |  |  |
| S3-223196 | LS on Support PIN application architecture and interaction | S6-223028 | replied to |  |  |
| S3-223197 | Clarification of CGI/Scripting component directory check | BSI (DE) | not pursued |  |  |
| S3-223198 | Clarification of SSI System Command Excecution test | BSI (DE) | not pursued |  |  |
| S3-223199 | TCG progress - report from TCG rapporteur | InterDigital, Inc. | noted |  |  |
| S3-223200 | PCR to 33.870 Changes to Solution #2 | InterDigital, Inc. | revised |  | S3-224069 |
| S3-223201 | PCR to 33.870 - New clause for mapping solutions and KIs | InterDigital, Inc. | not treated |  |  |
| S3-223202 | CR NRF deployments | Nokia, Nokia Shanghai Bell, Ericsson, Mavenir, Huawei, HiSilicon | agreed | S3-221867 |  |
| S3-223203 | Clarification on N32-f connection establishment with TLS | Nokia, Nokia Shanghai Bell | revised | S3-221841 | S3-223951 |
| S3-223204 | Reply LS on PLMN ID used in Roaming Scenarios | Nokia, Nokia Shanghai Bell | noted |  | - |
| S3-223205 | New SCAS test case for AUSF | Keysight Technologies UK Ltd | noted |  |  |
| S3-223206 | Clarification for IPSec in UPF interfaces | Keysight Technologies UK Ltd | not pursued |  | - |
| S3-223207 | Correction of requirement references in UPF test case | Keysight Technologies UK Ltd | agreed |  |  |
| S3-223208 | Update gNB test case for UP integrity protection | Keysight Technologies UK Ltd | not pursued |  |  |
| S3-223209 | Update to KI#1 providing VPLMN slice information to roaming UE | NEC Corporation | noted |  |  |
| S3-223210 | New solution to KI#1: Protection of SoR related information from UE to home network | NEC Corporation | not treated |  |  |
| S3-223211 | Discussion paper on open questions regarding 256-bit algorithms | KDDI Corporation | withdrawn |  |  |
| S3-223212 | Study on enabling a cryptographic algorithm transition to 256 bits | KDDI Corporation | withdrawn |  |  |
| S3-223213 | Reply LS on Time Synchronization Status notification towards UE(s) | Nokia, Nokia Shanghai Bell | revised |  | S3-223915 |
| S3-223214 | Introduction of DTLS 1.3 | Nokia, Nokia Shanghai Bell | withdrawn |  |  |
| S3-223215 | Terminology update of solution #6 | Lenovo | approved |  |  |
| S3-223216 | New solution addressing KI#6 | Lenovo, Nokia | not treated |  |  |
| S3-223217 | Update of solution #4 | Lenovo | revised |  | S3-224146 |
| S3-223218 | Solution for Trusted non-3GPP Access for SNPN | Lenovo | revised |  | S3-224034 |
| S3-223219 | Solution for Untrusted non-3GPP Access for SNPN | Lenovo | revised |  | S3-224035 |
| S3-223220 | New SID on QUICK optimization for access traffic steering, switching and splitting support in the 5G system architecture; Phase 3 | Lenovo | noted |  |  |
| S3-223221 | Conclusion for KI#1 | Lenovo | noted |  |  |
| S3-223222 | Evaluation Update of Solution #2 | Lenovo | noted |  |  |
| S3-223223 | PCR to 33.870 - Aggregate changes | InterDigital, Inc. | not treated |  |  |
| S3-223224 | Discussion paper on 5GC AIML system capability | InterDigital Communications | noted |  |  |
| S3-223225 | New key issue on Federated Learning AIML model privacy protection | InterDigital Communications | not treated |  |  |
| S3-223226 | New key issue on Federated Learning AIML model protection | InterDigital Communications | not treated |  |  |
| S3-223227 | Key issue on SN Name binding for Kausf in SNPN using AAA server for primary authentication | InterDigital Communications | not treated |  |  |
| S3-223228 | New Solution of authorization for EDGE-9 reference point | InterDigital Communications | not treated |  |  |
| S3-223229 | Reply LS to Reply LS on the user consent for trace reporting | Nokia, Nokia Shanghai Bell | revised |  | S3-223905 |
| S3-223230 | New Key issue for Detecting ranging triggered DoS attacks | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223231 | New key issue on enhancement of user consent for using MDT for NG-RAN AI/ML | Nokia, Nokia Shanghai Bell | noted |  | - |
| S3-223232 | Key Issue for Secure RRC connection setup procedure | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223233 | New Key issue for Updating security policy parameters when device is out of 5G coverage | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223234 | TMGI protection during group Paging | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223235 | LS on MOCN TMGI ID impacting MSK, MTK | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223236 | EN removal for MOCN solution#2 | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223237 | New solution for prevention of detection of priority access | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223238 | EN removal for privacy prevention of NAI solution | Nokia, Nokia Shanghai Bell | revised |  | S3-224114 |
| S3-223239 | Further Analysis for KI#1 in TR 33.875 | Mavenir | noted |  |  |
| S3-223240 | Conclusion on KI#1 in TR 33.875 | Mavenir | revised |  | S3-223984 |
| S3-223241 | Further Analysis for KI#4 in TR 33.875 | Mavenir | revised |  | S3-223988 |
| S3-223242 | Conclusion for KI#4 in TR 33.875 | Mavenir | revised |  | S3-223989 |
| S3-223243 | Further Analysis for KI#5 in TR 33.875 | Mavenir | noted |  |  |
| S3-223244 | Conclusion on KI#5 in TR 33.875 | Mavenir | revised |  | S3-224100 |
| S3-223245 | Further Analysis for KI#6 in TR 33.875 | Mavenir | noted |  |  |
| S3-223246 | Conclusion for KI#6 in TR 33.875 | Mavenir | revised |  | S3-224102 |
| S3-223247 | Update KI#5 | OPPO | revised |  | S3-223963 |
| S3-223248 | New solution for KI#5 | OPPO | revised |  | S3-224029 |
| S3-223249 | Update Annex A | OPPO, Xidian | approved |  |  |
| S3-223250 | Key issue on user consent for FL UE members | OPPO, Nokia, Nokia Shanghai Bell, Inter Digital | noted |  |  |
| S3-223251 | Discussion on Ambient IoT Security | OPPO | noted |  |  |
| S3-223252 | Discussion paper of WWC SID update for TNAP mobility | Nokia, Nokia Shanghai Bell,CableLabs, Lenovo, Apple | noted |  |  |
| S3-223253 | New SID on Security aspects for 5WWC Phase 2 | Nokia, Nokia Shanghai Bell, CableLabs, Lenovo, Apple | revised |  | S3-224047 |
| S3-223254 | updating the existing solution mapping | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223255 | Scope section alignment | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223256 | TNAP mobility architecture assumptions | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223257 | TNAP mobility solution with rand value | Nokia, Nokia Shanghai Bell, CableLabs, | revised |  | S3-224053 |
| S3-223258 | TNAP mobility solution with count | Nokia, Nokia Shanghai Bell, CableLabs, | revised |  | S3-224054 |
| S3-223259 | evaluation for solution 1 | Nokia, Nokia Shanghai Bell | revised |  | S3-224048 |
| S3-223260 | Discussion on authorization issue in inter NF mobility | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223261 | Clarification on authorization for inter NF mobility | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223262 | Correction in UPU procedure to align with stage 3 | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223263 | Correction in UPU procedure to align with stage 3 | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223264 | UPU procedure align with stage 3 for AMF not registered case | Nokia, Nokia Shanghai Bell | revised |  | S3-223938 |
| S3-223265 | LS reply on AKMA API | Nokia, Nokia Shanghai Bell | revised |  | S3-223921 |
| S3-223266 | AKMA API enhancement based on the LS | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223267 | alignment for solution1 for vAAnF or a new NF | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-223268 | alignment for solution1 related to internal AF | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-223269 | solution 1 evaluation | Nokia, Nokia Shanghai Bell | revised |  | S3-224078 |
| S3-223270 | KI1 conclusion | Nokia, Nokia Shanghai Bell, Lenovo, OPPO | not treated |  |  |
| S3-223271 | Discussion on privacy issue in AKMA | Nokia, Nokia Shanghai Bell, Samsung | not treated |  |  |
| S3-223272 | key issue on AKMA privacy | Nokia, Nokia Shanghai Bell, Samsung | not treated |  |  |
| S3-223273 | solution 1 evaluation | Nokia, Nokia Shanghai Bell | revised |  | S3-224014 |
| S3-223274 | KI#1 conclusion | Nokia, Nokia Shanghai Bell | merged |  | S3-224013 |
| S3-223275 | Key issue on Security criteria of UE selection for AIML | Nokia, Nokia Shanghai Bell, Inter Digital | noted |  |  |
| S3-223276 | ProSe - Evaluation Solution #10 | Philips International B.V. | revised |  | S3-224006 |
| S3-223277 | ProSe - Evaluation Solution #15 | Philips International B.V. | noted |  |  |
| S3-223278 | ProSe - Minnor editorial corrections in Solution #10 | Philips International B.V. | approved |  |  |
| S3-223279 | ProSe - Minnor updates in Solution #10 | Philips International B.V. | approved |  |  |
| S3-223280 | PIN - Addressing EN#1 in Solution #4 | Philips International B.V. | revised |  | S3-224073 |
| S3-223281 | PIN - Addressing EN#2 in Solution #4 | Philips International B.V. | revised |  | S3-224059 |
| S3-223282 | PIN - Addressing EN#3 in Solution #4 | Philips International B.V. | revised |  | S3-224074 |
| S3-223283 | PIN - Addressing EN#4 in Solution #4 | Philips International B.V. | revised |  | S3-224060 |
| S3-223284 | FBS - Way forward for solutions based on digital signatures addressing KI#2 | Philips International B.V. | not treated |  |  |
| S3-223285 | FBS - Additions in solution #25 | Philips International B.V. | not treated |  |  |
| S3-223286 | FBS - Evaluation of solution #25 | Philips International B.V. | not treated |  |  |
| S3-223287 | AKMA - Evaluation Solution #10 | Philips International B.V. | revised |  | S3-224010 |
| S3-223288 | Ranging - New solution KI#1, #2, #3 | Philips International B.V. | not treated |  |  |
| S3-223289 | Ranging - Update Key Issue #1- privacy risks of exposing positioning reference signals | Philips International B.V. | noted |  |  |
| S3-223290 | Sol#3 Resolution of EN on CAPIF support | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-223291 | Sol#3 Resolution of EN on visibility of application | Nokia, Nokia Shanghai Bell | revised |  | S3-224038 |
| S3-223292 | Sol#3 Resolution of EN on prearranged policies | Nokia, Nokia Shanghai Bell | revised |  | S3-224039 |
| S3-223293 | Sol#3 Resolution of EN on authorization of third party | Nokia, Nokia Shanghai Bell | revised |  | S3-224040 |
| S3-223294 | Sol#3 Resolution of EN on AKMA Usage | Nokia, Nokia Shanghai Bell | revised |  | S3-224041 |
| S3-223295 | Sol#3 Resolution of EN on Mutual Authentication | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223296 | Sol#3 Resolution of EN on Client Credential Grant | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223297 | Sol#3 Adding Evaluation | Nokia, Nokia Shanghai Bell | revised |  | S3-224042 |
| S3-223298 | Reply LS on impact to URSP rules enforcement report to 5GC | vivo | revised |  | S3-223912 |
| S3-223299 | Reply LS on Support PIN application architecture and interaction | vivo | revised |  | S3-224068 |
| S3-223300 | New solution for AF manipulate PIN | vivo | revised |  | S3-224064 |
| S3-223301 | New solution for PINE authentication and authorization by PEMC | vivo | noted |  |  |
| S3-223302 | New solution for PINE authentication and authorization over 5G UP | vivo | noted |  |  |
| S3-223303 | New solution for remote provisioning of credential for PINE | vivo | noted |  |  |
| S3-223304 | Update solution for PINE authentication over CP | vivo | noted |  |  |
| S3-223305 | Interim conclusions on KI#1 | vivo | noted |  |  |
| S3-223306 | Sol#3 Resolution of EN on authorization of PEGC | Nokia, Nokia Shanghai Bell | revised |  | S3-224088 |
| S3-223307 | Sol#3 Resolution of EN on identification of PINE | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-223308 | Sol#3 Adding Evaluation | Nokia, Nokia Shanghai Bell | revised |  | S3-224062 |
| S3-223309 | Ki#1 New Solution using AKMA | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223310 | Update TR 33.740 solution #1 | InterDigital, Europe, Ltd. | revised |  | S3-223969 |
| S3-223311 | Update TR 33.740 solution #2 | InterDigital, Europe, Ltd. | approved |  |  |
| S3-223312 | Update TR 33.740 solution #12 | InterDigital, Europe, Ltd. | revised |  | S3-224000 |
| S3-223313 | Update TR 33.740 solution #13 | InterDigital, Europe, Ltd. | revised |  | S3-224001 |
| S3-223314 | Update TR 33.740 solution #14 | InterDigital, Europe, Ltd. | revised |  | S3-224007 |
| S3-223315 | Alignment of Link Identifier Update (LIU) procedure | InterDigital, Europe, Ltd. | revised |  | S3-224170 |
| S3-223316 | Handling of PRUK desynchronization issue with 5G ProSe UE-to-Network Relay | InterDigital, Europe, Ltd. | agreed |  |  |
| S3-223317 | LS Reply on UE\_NOT\_FOUND cause code | InterDigital, Europe, Ltd. | revised |  | S3-223903 |
| S3-223318 | Resolution of Remote UE permanent identity in Remote UE Report procedure (CP) | InterDigital, Europe, Ltd. | not treated |  |  |
| S3-223319 | Resolution of Remote UE permanent identity in Remote UE Report procedure (UP) | InterDigital, Europe, Ltd. | not treated |  |  |
| S3-223320 | Discussion on Lawful Interception support for 5G ProSe Layer-3 UE-to-Network Relay | InterDigital, Europe, Ltd. | not treated |  |  |
| S3-223321 | LS on support for Lawful Intercept target identities for 5G ProSe Remote UE | InterDigital, Europe, Ltd. | not treated |  |  |
| S3-223322 | Living document to TS 33.503 for Prose Secondary Authentication | InterDigital, Europe, Ltd. | not treated |  |  |
| S3-223323 | Evaluation Solution #4 | InterDigital, Europe, Ltd. | revised |  | S3-224116 |
| S3-223324 | Evaluation Solution #5 | InterDigital, Europe, Ltd. | approved |  |  |
| S3-223325 | Conclusion TR 33.891 KI #1 | InterDigital, Europe, Ltd. | revised |  | S3-224117 |
| S3-223326 | Conclusion TR 33.891 KI #3 | InterDigital, Europe, Ltd. | revised |  | S3-224118 |
| S3-223327 | Conclusion TR 33.891 KI #4 | InterDigital, Europe, Ltd. | revised |  | S3-224119 |
| S3-223328 | Resolving Editor’s Note in Solution #20 in TR 33.875 | Mavenir | revised |  | S3-224110 |
| S3-223329 | Analysis for KI#11 in TR 33.875 | Mavenir | not treated |  |  |
| S3-223330 | Conclusion on KI#11 in TR 33.875 | Mavenir | revised |  | S3-223990 |
| S3-223331 | Clarification to the UPU procedures | Qualcomm Incorporated | not pursued |  |  |
| S3-223332 | Resolving the EN on CAA level ID during UUAA procedures | Qualcomm Incorporated | not pursued | S3-221827 | - |
| S3-223333 | Resolving the ENs on CAA level ID during revocation | Qualcomm Incorporated | revised | S3-221828 | S3-223928 |
| S3-223334 | Correction to the gNB threats in TR 33.926 | Qualcomm Incorporated | agreed |  |  |
| S3-223335 | Correction to the gNB threats in TR 33.926 | Qualcomm Incorporated | agreed |  |  |
| S3-223336 | Corrections to the test cases in TS 33.511 | Qualcomm Incorporated | agreed |  |  |
| S3-223337 | Corrections to the test cases in TS 33.511 | Qualcomm Incorporated | agreed |  |  |
| S3-223338 | Corrections to the threat references in TS 33.511 | Qualcomm Incorporated | agreed |  |  |
| S3-223339 | Corrections to the threat references in TS 33.511 | Qualcomm Incorporated | agreed |  |  |
| S3-223340 | Adding non-Uu user plane text cases to TS 33.511 | Qualcomm Incorporated | not pursued |  | - |
| S3-223341 | Adding non-Uu user plane text cases to TS 33.511 | Qualcomm Incorporated | not pursued |  |  |
| S3-223342 | Draft CR: Introducing split gNBs into TR 33.926 | Qualcomm Incoporated | revised | S3-222322 | S3-224169 |
| S3-223343 | Proposed text for gNB-CU part of draft CR to TR 33.926 | Qualcomm Incoporated | approved | S3-221815 |  |
| S3-223344 | Proposed text for gNB-CU-CP part of draft CR to TR 33.926 | Qualcomm Incoporated | approved | S3-221816 |  |
| S3-223345 | Add user plane threats for gNB-DU to the draft CR to TR 33.926 | Qualcomm Incoporated | approved |  |  |
| S3-223346 | Correcting the threats references for the gNB-CU | Qualcomm Incoporated | approved |  |  |
| S3-223347 | Adding user plane test cases for the gNB-CU | Qualcomm Incoporated | noted |  |  |
| S3-223348 | Correcting the threats references for the gNB-CU-CP | Qualcomm Incoporated | approved |  |  |
| S3-223349 | Adding test cases for the gNB-CU-CP | Qualcomm Incoporated | approved |  |  |
| S3-223350 | Correcting the threats references for the gNB-CU-UP | Qualcomm Incoporated | approved |  |  |
| S3-223351 | Adding test cases for the gNB-CU-UP | Qualcomm Incoporated | noted |  |  |
| S3-223352 | Correcting the threats references for the gNB-DU | Qualcomm Incoporated | approved |  |  |
| S3-223353 | Adding user plane test cases for the gNB-DU | Qualcomm Incoporated | approved |  |  |
| S3-223354 | Adding non-501 test cases for the gNB-CU | Qualcomm Incoporated | approved |  |  |
| S3-223355 | Proposed key issue on the privacy of 3GPP identifiers used to transport Broadcast Remote ID | Qualcomm Incorporated | approved | S3-222754 |  |
| S3-223356 | Proposed solution on the privacy of 3GPP identifiers used to transport broadcast remote ID | Qualcomm Incorporated | approved | S3-222756 |  |
| S3-223357 | Proposed resolution of pairing EN in solution #3 | Qualcomm Incorporated | noted |  |  |
| S3-223358 | Proposed resolution of DAA credentials EN in solution #3 | Qualcomm Incorporated | approved |  |  |
| S3-223359 | Adding a K\_AUSF refresh use case | Qualcomm Incorporated | noted |  |  |
| S3-223360 | Adding an evaluation of solution #5 | Qualcomm Incorporated | revised |  | S3-224015 |
| S3-223361 | Proposed conclusion for the study | Qualcomm Incorporated | merged |  | S3-224013 |
| S3-223362 | Method negotiation using TLS 1.3 | Qualcomm Incorporated | revised |  | S3-223940 |
| S3-223363 | Common authentication method between EEC and ECS/EES | Qualcomm Incorporated | not treated |  |  |
| S3-223364 | Proposed solution for TNAP mobility | Qualcomm Incorporated | revised |  | S3-224055 |
| S3-223365 | Clarification on 5G MBS user-plane procedure | Qualcomm Incorporated | merged |  | S3-223920 |
| S3-223366 | Reply LS on Security architecture for 5G multicast/broadcast services | Qualcomm Incorporated | merged |  | S3-223919 |
| S3-223367 | LS on Source user info in Direct Communication Request in UE-to-Network Relay | Qualcomm Incorporated | noted |  |  |
| S3-223368 | Corrections in privacy protection of 5G ProSe UE-to-Network relay procedure | Qualcomm Incorporated | revised |  | S3-223957 |
| S3-223369 | A new solution for UE-to-UE Relay discovery message protection for Model A discovery | Qualcomm Incorporated | revised |  | S3-223997 |
| S3-223370 | A new solution for UE-to-UE Relay discovery message protection for Model B discovery | Qualcomm Incorporated | revised |  | S3-223998 |
| S3-223371 | A new solution for secure PC5 link establishment for UE-to-UE Relay | Qualcomm Incorporated | revised |  | S3-223999 |
| S3-223372 | Conclusion for KI #2 | Qualcomm Incorporated | noted |  |  |
| S3-223373 | Conclusion for KI #3 | Qualcomm Incorporated | not treated |  |  |
| S3-223374 | SUCI protection for non-3GPP (WLAN) access to SNPN | Qualcomm Incorporated | noted |  |  |
| S3-223375 | Reply LS on Progress and open issues for NPN enhancements in Rel-18 | Qualcomm Incorporated | revised |  | S3-224175 |
| S3-223376 | Resolution of an EN in solution #8 | Qualcomm Incorporated | not treated |  |  |
| S3-223377 | Evaluation of solution #8 | Qualcomm Incorporated | revised |  | S3-224176 |
| S3-223378 | Solution for KI#1: Authentication and Authorization of PINE | Qualcomm Incorporated | revised |  | S3-224067 |
| S3-223379 | Reply LS on protection of the URSP rules from HPLMN | Qualcomm Incorporated | revised |  | S3-223911 |
| S3-223380 | Evaluation for Solution #3 | Nokia, Nokia Shanghai Bell | revised |  | S3-223986 |
| S3-223381 | Evaluation for Solution #11 | Nokia, Nokia Shanghai Bell | revised |  | S3-223987 |
| S3-223382 | Resolving EN and evaluation for Solution #10 | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223383 | Resolving EN and evaluation for Solution #12 | Nokia, Nokia Shanghai Bell | revised |  | S3-223991 |
| S3-223384 | Solution for ensuring the management of bulk certificate updates | Nokia, Nokia Shanghai Bell | revised |  | S3-224139 |
| S3-223385 | Preliminary conclusion for KI #1 | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-223386 | LS to GSMA DESS on SEPP certificates | Nokia, Nokia Shanghai Bell | revised |  | S3-223910 |
| S3-223387 | Address EN on PACF and MANO Communication | Johns Hopkins University APL, US National Security Agency, CISA ECD | revised |  | S3-224065 |
| S3-223388 | Solution for authorization in FL | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223389 | Resolving ENs and evaluation for Solution #7 | Nokia, Nokia Shanghai Bell | revised |  | S3-224144 |
| S3-223390 | Evaluation for Solution #6 | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223391 | Evaluation for Solution #5 | Nokia, Nokia Shanghai Bell | revised |  | S3-224079 |
| S3-223392 | Evaluation for Solution #3 | Nokia, Nokia Shanghai Bell | revised |  | S3-224145 |
| S3-223393 | Address EN on Verifying Attestation Results for NRF and PACF | Johns Hopkins University APL, US National Security Agency, CISA ECD | noted |  |  |
| S3-223394 | User plane security for Non-SBA based interfaces | Nokia, Nokia Shanghai Bell | revised | S3-221789 | S3-223949 |
| S3-223395 | 33.896: Updates to Key Issue on User Consent for NTN | Google Inc. | merged |  | S3-224090 |
| S3-223396 | New KI: Maturity model for ZTS in 5GC | MITRE Corporation, US National Security Agency | noted |  |  |
| S3-223397 | New KI: MFA for NF in 5GC | MITRE Corporation | noted |  |  |
| S3-223398 | Revise the pre-requisite of access token request | China Telecommunications | withdrawn |  |  |
| S3-223399 | Revise the pre-requisite of access token request(mirror) | China Telecommunications | agreed |  |  |
| S3-223400 | Update to solution#5 in TR 33.740 - align with SA2 | China Telecom Corporation Ltd. | revised |  | S3-223970 |
| S3-223401 | Update to solution#5 in TR 33.740 - remove the EN | China Telecom Corporation Ltd. | approved |  |  |
| S3-223402 | Update to solution#6 in TR 33.893 - add authorization check step | China Telecom Corporation Ltd. | not treated |  |  |
| S3-223403 | Update to solution#6 in TR 33.893 - SLPK ID usage | China Telecom Corporation Ltd. | not treated |  |  |
| S3-223404 | Revise the pre-requisite of access token request | China Telecommunications | agreed |  |  |
| S3-223405 | Update KI #1 Protection of Satellite Coverage Information used by 5GC/EPC | China Telecom Corporation Ltd. | merged |  | S3-224072 |
| S3-223406 | Remove EN to Key Issue #2 | Johns Hopkins University APL, US National Security Agency, InterDigital, Apple, CableLabs | not treated |  |  |
| S3-223407 | Clarify the use of cross-certificates | China Telecommunications | not treated |  |  |
| S3-223408 | Clarify authorization to non-SBA interfaces | China Telecommunications | noted |  |  |
| S3-223409 | Figure CR in 6.3.3.3.2 of TS33.503 | China Telecom Corporation Ltd.,CATT | merged |  | S3-223956 |
| S3-223410 | Update to KI#1 | Huawei, HiSilicon | noted |  |  |
| S3-223411 | New solution to KI#1 | Huawei, HiSilicon | not treated |  |  |
| S3-223412 | Discussion on KI#1 | Huawei, HiSilicon | noted |  |  |
| S3-223413 | Update to KI#3 | Huawei, HiSilicon | not treated |  |  |
| S3-223414 | Address EN1 on S-NSSAI mapping | Huawei, HiSilicon | not pursued |  |  |
| S3-223415 | Address EN2 on AF Authorization | Huawei, HiSilicon | merged |  | S3-223926 |
| S3-223416 | Address issue in NSSAA procedures for multiple registration | Huawei, HiSilicon | not pursued |  |  |
| S3-223417 | Address issue in NSSAA procedures for multiple registration (mirror) | Huawei, HiSilicon | not pursued |  |  |
| S3-223418 | Address ENs in revocation procedures | Huawei, HiSilicon | merged |  | S3-223928 |
| S3-223419 | Address ENs in UUAA procedures | Huawei, HiSilicon | merged |  | S3-223927 |
| S3-223420 | Update to solution #25 | Huawei, HiSilicon | not treated |  |  |
| S3-223421 | Discussion for L2 UE-to-Network Relay Multi-Path Security | OPPO | noted |  |  |
| S3-223422 | Adding AKMA subscription and AKMA context asynchronization threats to TR 33.926 | ZTE Corporation | noted |  |  |
| S3-223423 | Security Assurance Requirement and Test for AKMA subscription data and AKMA context synchronization | ZTE Corporation | noted |  |  |
| S3-223424 | Add Context\_Remove into table 7.1.1-1 | ZTE Corporation | not pursued |  |  |
| S3-223425 | Add MnF in clause 6.6.1and 6.7 | ZTE Corporation | not pursued |  |  |
| S3-223426 | Add one note about AKMA subscription data and AKMA context asynchronization in clause 6.6.1 | ZTE Corporation | not pursued |  |  |
| S3-223427 | Add a Note to address the subscription synchronization between PAnF and UDM | ZTE Corporation | not pursued |  |  |
| S3-223428 | Add functionality description of PAnF | ZTE Corporation | revised |  | S3-223961 |
| S3-223429 | Clarification of subscription information in PAnF | ZTE Corporation | revised |  | S3-223960 |
| S3-223430 | Add FC Value in 33.503 | ZTE Corporation | agreed |  |  |
| S3-223431 | Allocate FC Value for 33.503 | ZTE Corporation | withdrawn |  |  |
| S3-223432 | Address EN and add evaluation for solution 9 | ZTE Corporation | revised |  | S3-224032 |
| S3-223433 | Address EN and update solution 3 | ZTE Corporation | approved |  |  |
| S3-223434 | Conclusion for KI#1 | ZTE Corporation | not treated |  |  |
| S3-223435 | Update the Key issue of AKMA roaming | ZTE Corporation | not treated |  |  |
| S3-223436 | Update the solution 4 | ZTE Corporation | approved |  |  |
| S3-223437 | Add evaluation to solution #3 | ZTE Corporation | approved |  |  |
| S3-223438 | Add some context to solution #3 | ZTE Corporation | revised |  | S3-224017 |
| S3-223439 | Removal of Editor’s Notes of solution #3 | ZTE Corporation | approved |  |  |
| S3-223440 | Add conclusion to KI#2.2 | ZTE Corporation | not treated |  |  |
| S3-223441 | Add evaluation to solution #6 | ZTE Corporation | not treated |  |  |
| S3-223442 | Update to KI#1 providing VPLMN slice information to roaming UE | ZTE Corporation | not treated |  |  |
| S3-223443 | New solution to KI#1 protecting capability indication in UE initiated VPLMN slice-based SoR | ZTE Corporation | not treated |  |  |
| S3-223444 | New KI - User consent for application layer AIML operation | ZTE Corporation | noted |  |  |
| S3-223445 | DTLS for AKMA WID | ZTE Corporation | revised |  | S3-223959 |
| S3-223446 | Remove EN and Provide Evaluation for Solution #4 | China Mobile (Suzhou) Software | revised |  | S3-224174 |
| S3-223447 | KI for L2 UE-to-Network Relay Multi-Path Security | OPPO | noted |  |  |
| S3-223448 | Resolving ENs in Solution #9 for Edge Security | OPPO | not treated |  |  |
| S3-223449 | Resolving ENs in Solution #10 for Edge Security | OPPO | not treated |  |  |
| S3-223450 | Resolving ENs in Solution #11 for Edge Security | OPPO | not treated |  |  |
| S3-223451 | Update to ProSe Security Sol#6 | OPPO | revised |  | S3-223972 |
| S3-223452 | Address ENs in Sol#6 for ProSe Security | OPPO | approved |  |  |
| S3-223453 | Add Evaluation for ProSe Security Sol#6 | OPPO | revised |  | S3-224008 |
| S3-223454 | Reply LS on User consent for Application Detection | OPPO | merged |  | S3-223907 |
| S3-223455 | Discussion Paper on evaluations and conclusions of key issue#1 | China Mobile (Suzhou) Software | noted |  |  |
| S3-223456 | Adding AAnF critical assets and threats to TR 33.926 | China Mobile (Suzhou) Software | withdrawn |  |  |
| S3-223457 | Adding a test case of AKMA key strorage and update | China Mobile (Suzhou) Software | approved |  |  |
| S3-223458 | Adding description about overview of vendor development and product lifecycle processes and test laboratory accreditation to clause 6.1 | China Mobile (Suzhou) Software | revised |  | S3-224080 |
| S3-223459 | Adding description about audit and accreditation of vendor development and product lifecycle processes to clause 6.2 | China Mobile (Suzhou) Software | revised |  | S3-224081 |
| S3-223460 | Adding description about Audit and accreditation of test laboratories to clause 6.3 | China Mobile (Suzhou) Software | revised |  | S3-224082 |
| S3-223461 | Adding description about monitoring to clause 6.4 | China Mobile (Suzhou) Software | approved |  |  |
| S3-223462 | Clarifies to clause 6.3.5 to include the CP mechanism key identifier | Huawei, HiSilicon | merged |  | S3-223956 |
| S3-223463 | Clarifies to the match report procedures under UE-to-Network relay scenario | Huawei, HiSilicon | merged |  | S3-223958 |
| S3-223464 | New solution for protecting direct communnication | Huawei, HiSilicon | not treated |  |  |
| S3-223465 | New solution of security for the Ranging SL positioning device discovery | Huawei, HiSilicon | not treated |  |  |
| S3-223466 | Add conclusion to KI#1 about Direct C2 security | Huawei, HiSilicon | merged |  | S3-224117 |
| S3-223467 | Add conclusion to KI#2 about DAA unicast security | Huawei, HiSilicon | revised |  | S3-224093 |
| S3-223468 | Add conclusion to KI#6 about Privacy for 3GPP ID in DAA | Huawei, HiSilicon | approved |  |  |
| S3-223469 | New solution to establish UE-to-UE security | Huawei, HiSilicon | revised |  | S3-223964 |
| S3-223470 | Conclusion on UE-to-UE relay security | Huawei, HiSilicon | revised |  | S3-224095 |
| S3-223471 | Conclusion on UE-to-UE relay Authorisation | Huawei, HiSilicon | revised |  | S3-223995 |
| S3-223472 | Reply LS about Protection of URSP rules from HPLMN | Huawei, HiSilicon | merged |  | S3-223911 |
| S3-223473 | Add conclusion to KI#4 about privacy protection over PC5 link for C2 | Huawei, HiSilicon | merged |  | S3-224119 |
| S3-223474 | Add conclusion to KI#5 about DAA unicast privacy | Huawei, HiSilicon | revised |  | S3-224094 |
| S3-223475 | Evaluate to the solution #3 | Huawei, HiSilicon | merged |  | S3-223973 |
| S3-223476 | Evaluate to the solution #5 | Huawei, HiSilicon | revised |  | S3-224009 |
| S3-223477 | Evaluate to the solution #15 | Huawei, HiSilicon | revised |  | S3-223968 |
| S3-223478 | Evaluate to the solution #20 | Huawei, HiSilicon | not treated |  |  |
| S3-223479 | Update to KI#2 | Huawei, HiSilicon | revised |  | S3-224159 |
| S3-223480 | New Solution reusing exisiting mechanism for privacy protection for 5GC assistance information exposure to AF | Huawei, HiSilicon | noted |  | - |
| S3-223481 | New Solution reusing existing mechanism for authorization of 5GC assistance information exposure to AF | Huawei, HiSilicon | revised |  | S3-223980 |
| S3-223482 | Reply LS on User Consent for EDGEAPP | Huawei, HiSilicon | revised |  | S3-223904 |
| S3-223483 | Key Issue Update on User Consent for NTN | Huawei, HiSilicon, Philips International B.V., Xiaomi, Qualcomm, Apple | revised |  | S3-224090 |
| S3-223484 | New solution on User Consent Architecture for RAN as enforcement point | Huawei, HiSilicon | noted |  |  |
| S3-223485 | Overview of UC3S\_Ph2 | Huawei, HiSilicon | revised |  | S3-224091 |
| S3-223486 | Conclusion for key issue #1 | Huawei, HiSilicon | noted |  |  |
| S3-223487 | New WID on UC3S\_Ph2 | Huawei, HiSilicon | noted |  |  |
| S3-223488 | Address EN for solution 1 | Huawei, HiSilicon | revised |  | S3-224101 |
| S3-223489 | Conclusion for key issue #2 | Huawei, HiSilicon | noted |  |  |
| S3-223490 | New solution on Reusing N3GPP authentication for NPN | Huawei, HiSilicon | revised |  | S3-224037 |
| S3-223491 | Reply LS on Progress and open issues for NPN enhancements in Rel-18 | Huawei, HiSilicon | noted |  |  |
| S3-223492 | Reply LS on the User Consent for Trace Reportings | Huawei, HiSilicon | merged |  | S3-223905 |
| S3-223493 | New Test Case on UP IP policy selection in S1 Handover | Huawei, HiSilicon | approved |  |  |
| S3-223494 | New Threat on Bidding down prevention for UP IP Policy | Huawei, HiSilicon | approved |  |  |
| S3-223495 | New Test Case on Bidding down prevention for UP IP Policy | Huawei, HiSilicon | approved |  |  |
| S3-223496 | Evaluation on Solution 5 | Huawei, HiSilicon | noted |  |  |
| S3-223497 | A new solution to KI#1 | Huawei, HiSilicon | not treated |  |  |
| S3-223498 | conclusion to KI#1 | Huawei, HiSilicon | not treated |  |  |
| S3-223499 | Update KI#3 | Huawei, HiSilicon | revised |  | S3-224152 |
| S3-223500 | Solution to KI#3 | Huawei, HiSilicon | revised |  | S3-224153 |
| S3-223501 | Conclusion to KI#3 | Huawei, HiSilicon | revised |  | S3-224154 |
| S3-223502 | Update solution2 | Huawei, HiSilicon | revised |  | S3-224018 |
| S3-223503 | update the 5.1 | Huawei, HiSilicon | approved |  | - |
| S3-223504 | New WID on HONTRA | Huawei, HiSilicon | revised |  | S3-224173 |
| S3-223505 | conclusion on AKMA roaming | Huawei, HiSilicon | revised |  | S3-224136 |
| S3-223506 | living doc to TR33.926 | Huawei, HiSilicon | revised |  | S3-224155 |
| S3-223507 | living doc to TR33.216 | Huawei, HiSilicon | revised |  | S3-224156 |
| S3-223508 | living doc to TS33.117 | Huawei, HiSilicon | approved |  |  |
| S3-223509 | Update requirement and add new test case to clause 4.2.3.4.3.1 | Huawei, HiSilicon | noted |  |  |
| S3-223510 | Update requirement and add new test case to clause 4.2.3.4.3.2 | Huawei, HiSilicon | noted |  |  |
| S3-223511 | Update KI#1 | Huawei, HiSilicon | revised |  | S3-224011 |
| S3-223512 | update KI#4 | Huawei, HiSilicon | approved |  |  |
| S3-223513 | a new KI on TNAP mobility with full authentication | Huawei, HiSilicon | noted |  |  |
| S3-223514 | address EN for solution #8 and add evaluation | Huawei, HiSilicon | revised |  | S3-223992 |
| S3-223515 | address EN for solution #9 and add evaluation | Huawei, HiSilicon | revised |  | S3-223993 |
| S3-223516 | add conclusion for KI # 6 | Huawei, HiSilicon | not treated |  |  |
| S3-223517 | Discussion on Kiab handling in IAB migration | Huawei, HiSilicon | noted |  |  |
| S3-223518 | CR on Kiab handling in IAB migration\_new psk | Huawei, HiSilicon | not pursued |  |  |
| S3-223519 | CR on Kiab handling in IAB migration\_old psk | Huawei, HiSilicon | revised |  | S3-223950 |
| S3-223520 | LS on Kiab handling in IAB migration | Huawei, HiSilicon | noted |  |  |
| S3-223521 | Addressing the ENs in solution 1 | Huawei, HiSilicon | revised |  | S3-224063 |
| S3-223522 | Editorial change on USS authorization | Huawei, HiSilicon | agreed |  |  |
| S3-223523 | update to key issue 1 | Huawei, HiSilicon | merged |  | S3-224072 |
| S3-223524 | Editorial change to TR 33.883 | Huawei, HiSilicon | approved |  |  |
| S3-223525 | A new solution on MOCN network sharing scenario | Huawei, HiSilicon | revised |  | S3-224182 |
| S3-223526 | A new solution on TMGI protection | Huawei, HiSilicon | noted |  |  |
| S3-223527 | CR on control-plane procedure in MBS | Huawei, HiSilicon | revised |  | S3-223917 |
| S3-223528 | Reply LS on the impact of MSK update on MBS multicast session update procedure | Huawei, HiSilicon | revised |  | S3-223918 |
| S3-223529 | CR on authentication in user plane procedure in MBS | Huawei, HiSilicon | revised |  | S3-223920 |
| S3-223530 | Reply LS on Security architecture for 5G multicast/broadcast services | Huawei, HiSilicon | revised |  | S3-223919 |
| S3-223531 | Addressing the editor's note in sol#1 | Huawei, HiSilicon | revised |  | S3-223982 |
| S3-223532 | Adding an editor's note to sol#3 | Huawei, HiSilicon | not treated |  |  |
| S3-223533 | Editorial changes to the living document for MnF SCAS | Huawei, HiSilicon | revised |  | S3-224121 |
| S3-223534 | New WID on security assurance methodology enhancements | Huawei, HiSilicon | noted |  |  |
| S3-223535 | Discussion | Huawei, HiSilicon | withdrawn |  |  |
| S3-223536 | Evaluation of tenet 4 on resource access | Huawei, HiSilicon | noted |  | - |
| S3-223537 | Update | Huawei, HiSilicon | withdrawn |  |  |
| S3-223538 | Updates to evaluation of tenet 6 | Huawei, HiSilicon | noted |  |  |
| S3-223539 | Updates to evaluation of tenet 7 | Huawei, HiSilicon | merged |  | S3-224126 |
| S3-223540 | Updates to solution 3 based on pseudonyms | Huawei, HiSilicon | revised |  | S3-224134 |
| S3-223541 | Updates to clause 4.2 of MnF SCAS | Huawei, HiSilicon | approved |  |  |
| S3-223542 | Conclusion on KI#1 and KI#2 in TR 33.741 | Huawei, HiSilicon | merged |  | S3-224013 |
| S3-223543 | Update to solution #3 | Huawei, HiSilicon | revised |  | S3-223994 |
| S3-223544 | Policy based certificate update/renewal | Huawei, HiSilicon | revised |  | S3-224140 |
| S3-223545 | Conclusion on KI#2.5:Authentication and Authorization between AC and EEC | Huawei, HiSilicon | approved |  |  |
| S3-223546 | Addressing the ENs in solution 15 | Huawei, HiSilicon | not treated |  |  |
| S3-223547 | Addressing the ENs in solution 16 | Huawei, HiSilicon | not treated |  |  |
| S3-223548 | Evaluation to solution 15 | Huawei, HiSilicon | not treated |  |  |
| S3-223549 | Evaluation to solution 16 | Huawei, HiSilicon | not treated |  |  |
| S3-223550 | Updates to evalution of solution 2 | Huawei, HiSilicon | noted |  |  |
| S3-223551 | Evaluation to solution 18 | Huawei, HiSilicon | revised |  | S3-224028 |
| S3-223552 | Update to UE-to-Network relay security procedures | Huawei, HiSilicon | merged |  | S3-223956 |
| S3-223553 | Adding description about SCAS instantiation documents creation to clause 7.1 | China Mobile (Suzhou) Software | approved |  |  |
| S3-223554 | Adding description about network product development process and network product lifecycle management to clause 7.2 | China Mobile (Suzhou) Software | approved |  |  |
| S3-223555 | Adding description about SCAS instantiation evaluation overview to clause 7.2 | China Mobile (Suzhou) Software | approved |  |  |
| S3-223556 | Adding description about content and process of SCAS instantiation evaluation to clause 7.2 | China Mobile (Suzhou) Software | revised |  | S3-224083 |
| S3-223557 | Allocate FC Value for 33.503 | ZTE Corporation | revised |  | S3-224171 |
| S3-223558 | Access to localized services using existing mechanisms | Intel | revised |  | S3-224043 |
| S3-223559 | Access to localized services using AKMA mechanisms | Intel | noted |  |  |
| S3-223560 | FL GROUP AUTHORIZATION OF NWDAF(S) IN 5GC | Intel | not treated |  |  |
| S3-223561 | Policy-based C-RNTI and TMSI refresh | Intel | not treated |  |  |
| S3-223562 | Guidance for Enforcing User Consent | Huawei, HiSilicon | revised |  | S3-224092 |
| S3-223563 | Updates to solution 2: remove EN E2E protection | Intel | revised |  | S3-224147 |
| S3-223564 | Adding description about testing to clause 7.2 | China Mobile (Suzhou) Software | approved |  |  |
| S3-223565 | Conclusion for key issue #2 | Huawei, HiSilicon | noted |  |  |
| S3-223566 | LS on User Consent for Roaming | Huawei, HiSilicon | noted |  |  |
| S3-223567 | Living document for MnF SCAS | Huawei, HiSilicon | revised |  | S3-224122 |
| S3-223568 | New SID on 5G Per-QoS Flow User Plane Security Control | Intel, Samsung | noted |  |  |
| S3-223569 | SCAS process enhancements | Huawei, HiSilicon | not pursued |  |  |
| S3-223570 | Need for Rel-18 study on UP security enhancement | Intel, Samsung | noted |  |  |
| S3-223571 | Updates to clause 4.3 of MnF SCAS | Huawei, HiSilicon | revised |  | S3-224123 |
| S3-223572 | Adding description about self-declaration to clause 7.3 | China Mobile (Suzhou) Software | approved |  |  |
| S3-223573 | CR on Remote UE Authorization check before using 5GPRUK generate KNR\_ProSe | Huawei, HiSilicon | not pursued |  |  |
| S3-223574 | draft\_Reply LS to Progress and open issues for NPN enhancements in Rel-18 | Intel | merged |  | S3-224175 |
| S3-223575 | Adding contents into clause 7.5 and 7.6 | China Mobile (Suzhou) Software | approved |  |  |
| S3-223576 | Solution on prevention of URSP rule misuse by a non-genuine application using home network anchor | Intel | revised |  | S3-224177 |
| S3-223577 | Update of KI #1 | THALES | noted |  | - |
| S3-223578 | Resolution of EN in solution #8 | THALES, Qualcomm Incorporated | not treated |  |  |
| S3-223579 | Resolution of ENs in solution #14 | THALES | revised |  | S3-224115 |
| S3-223580 | Update of LI requirements on solution #5 | LG Electronics France | revised |  | S3-224057 |
| S3-223581 | Update of LI requirements on solution #12 | LG Electronics France | revised |  | S3-224058 |
| S3-223582 | Discussion on IMS SCAS status | Huawei, HiSilicon | noted |  |  |
| S3-223583 | LS on IMS SCAS to GSMA | Huawei, HiSilicon | revised |  | S3-223934 |
| S3-223584 | Reply LS on Network federation interface for Telco edge consideration | Huawei, HiSilicon | revised |  | S3-223914 |
| S3-223585 | Conclusion on KI2.3 Authentication and Authorization between V-ECS and H-ECS | Huawei, HiSilicon | revised |  | S3-224023 |
| S3-223586 | Conclusion on KI2.2 Authentication mechanism selection | Huawei, HiSilicon | revised |  | S3-223939 |
| S3-223587 | Conclusion on KI1.1 How to authorize PDU session to support local traffic routing to access an EHE in the VPLMN | Huawei, HiSilicon | approved |  |  |
| S3-223588 | Addressing authentication and authorization for EDGE-9 | Huawei, HiSilicon | agreed |  |  |
| S3-223589 | New WID on Security Aspects of Enhancement of Support for Edge Computing in 5GC — phase 2 | Huawei, HiSilicon | noted |  |  |
| S3-223590 | Discussion on notification URI disclosure in "Subscribe-Notify" scenarios | Huawei, HiSilicon | noted |  |  |
| S3-223591 | LS on notification URI disclosure | Huawei, HiSilicon | noted |  |  |
| S3-223592 | Conclusion on KI#1 | Huawei, HiSilicon | merged |  | S3-223984 |
| S3-223593 | Solution for authorization negotiation with bootstrapping mechanism | Huawei, HiSilicon | approved |  |  |
| S3-223594 | Conclution on KI#7 | Huawei, HiSilicon | revised |  | S3-224104 |
| S3-223595 | LS on authorization negotiation | Huawei, HiSilicon | noted |  |  |
| S3-223596 | Removing EN in KI#3 | Huawei, HiSilicon | merged |  | S3-223985 |
| S3-223597 | EN addressing for solution#2 | Huawei, HiSilicon | revised |  | S3-224157 |
| S3-223598 | Adding conclusion to KI#3 | Huawei, HiSilicon | noted |  |  |
| S3-223599 | New solution to KI#2 | Huawei, HiSilicon | revised |  | S3-224158 |
| S3-223600 | Discussion on way forward for KI#1 | Huawei, HiSilicon | noted |  |  |
| S3-223601 | Adding conclusion to KI#1 | Huawei, HiSilicon | noted |  |  |
| S3-223602 | Clarification on TC\_ IP\_MULTICAST\_HANDLING | Huawei, HiSilicon | agreed |  |  |
| S3-223603 | Clarification on TC\_ IP\_MULTICAST\_HANDLING | Huawei, HiSilicon | agreed |  |  |
| S3-223604 | Clarification on IP\_FWD\_DISABLING | Huawei, HiSilicon | revised |  | S3-223929 |
| S3-223605 | Clarification on IP\_FWD\_DISABLING | Huawei, HiSilicon | revised |  | S3-223930 |
| S3-223606 | clarification on PLMN ID verification in SNPN | Huawei, HiSilicon | revised |  | S3-223941 |
| S3-223607 | add test case to include SNPN snenario in PLMNID verification | Huawei, HiSilicon | noted |  |  |
| S3-223608 | New solution on boot time attestation at 3GPP function level | Huawei, HiSilicon | noted |  |  |
| S3-223609 | Reply LS on autentication result removal | Huawei, HiSilicon | merged |  | S3-223908 |
| S3-223610 | Discussion paper on way forward for conclusion | Huawei, HiSilicon | noted |  |  |
| S3-223611 | A new solution on TNAP mobility with full authentication | Huawei, HiSilicon | noted |  |  |
| S3-223612 | LS to inform about the new GSMA Task Force | GSMA | noted |  |  |
| S3-223613 | SERP - LS on security protection on RRCResumeRequest message | Apple | noted |  |  |
| S3-223614 | 5GFBS - Addressing UE bahaviors on signature verification | Apple | not treated |  |  |
| S3-223615 | 5GFBS - Reply LS on authenticity and replay protection of system information | Apple | noted |  |  |
| S3-223616 | MEC - New key issue on AF specific identifier | Apple | revised |  | S3-224012 |
| S3-223617 | MEC- Addressing the EN#1 in solution#7 | Apple | not treated |  |  |
| S3-223618 | MEC- Addressing the EN#2 in solution#7 on default authentication mechanism | Apple | not treated |  |  |
| S3-223619 | CR on AES-GCM/GMAC in IMS SIP security | Apple | revised |  | S3-223925 |
| S3-223620 | Reply LS on user’s consent for EDGEAPP (S3-223149) | Apple | merged |  | S3-223904 |
| S3-223621 | Reply LS on the user consent for trace reporting (S3-223162) | Apple | merged |  | S3-223905 |
| S3-223622 | LS on impact of URSP rule enforcement report to 5GC (S3-223173) | Apple | merged |  | S3-223912 |
| S3-223623 | New KI: Support for Emergency service over UE-to-Network Relaying | Ericsson | revised |  | S3-223996 |
| S3-223624 | Support Emergency Service over UE-to-Network Relay | Ericsson | revised |  | S3-224005 |
| S3-223625 | [Draft] LS on ProSe Secondary Authentication | Ericsson | not treated |  | - |
| S3-223626 | Evaluation to solution #3 | Ericsson | revised |  | S3-223973 |
| S3-223627 | Evaluation to solution #4 | Ericsson | noted |  |  |
| S3-223628 | Resolve EN of U2U determination in target UE in Solution3 | Ericsson | approved |  |  |
| S3-223629 | Resolve EN of Direct Communication Invite in Solution3 | Ericsson | revised |  | S3-224002 |
| S3-223630 | New solution with authorization tokens exchanged after PC5 security establishment | Ericsson | not treated |  |  |
| S3-223631 | User consent clarification | Ericsson | not pursued |  |  |
| S3-223632 | Adding description about partial compliance and use of SECAM requirements in network product development cycle to clause 7.4 | China Mobile (Suzhou) Software | revised |  | S3-224084 |
| S3-223633 | Adding missing content from last implementation | China Mobile (Suzhou) Software | approved |  |  |
| S3-223634 | Adding clause 4.4 in TR 33.927 | China Mobile (Suzhou) Software | revised |  | S3-224085 |
| S3-223635 | Central authorization for user consent handling | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-223636 | pCR to TR33.740 Update Solution16 for removing ENs | CATT | revised |  | S3-223974 |
| S3-223637 | Adding clause 5 Generic assets and threats in TR 33.927 | China Mobile (Suzhou) Software | approved |  |  |
| S3-223638 | pCR to TR33.740 Update Solution17 for removing ENs | CATT | revised |  | S3-224003 |
| S3-223639 | KI and Solution on user consent in roaming | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223640 | Adding clause 6 in TR 33.927 | China Mobile (Suzhou) Software | revised |  | S3-224086 |
| S3-223641 | pCR to TR33.740 Update Solution18 for removing ENs | CATT | not treated |  |  |
| S3-223642 | Proposal to add 4.1 in TS33.527 | China Mobile (Suzhou) Software | noted |  |  |
| S3-223643 | pCR to TR33.740 Evaluation of Solution16 | CATT | revised |  | S3-223975 |
| S3-223644 | pCR to TR33.740 Evaluation of Solution17 | CATT | revised |  | S3-224004 |
| S3-223645 | Add conclusion to key issue #1 | China Mobile (Suzhou) Software | noted |  |  |
| S3-223646 | Rel-15 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | revised |  | S3-223922 |
| S3-223647 | Rel-16 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | revised |  | S3-223923 |
| S3-223648 | Rel-17 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | revised |  | S3-223924 |
| S3-223649 | [DRAFT] Reply LS on user’s consent for EDGEAPP | Ericsson | merged |  | S3-223904 |
| S3-223650 | Correction and clarification in user consent requirements | Ericsson | not pursued |  |  |
| S3-223651 | A new solution for EEC authentication | Ericsson | not treated |  |  |
| S3-223652 | Updating solution #17 | Ericsson | not treated |  |  |
| S3-223653 | Resolving ENs in solution #13 | Ericsson | revised |  | S3-224025 |
| S3-223654 | Evaluation of solution #13 | Ericsson | revised |  | S3-224026 |
| S3-223655 | Evaluation of solution #14 | Ericsson | revised |  | S3-224027 |
| S3-223656 | Evaluation of solution #17 | Ericsson | not treated |  |  |
| S3-223657 | Authorization of AI/ML model sharing between different vendors and usage of one-time URLs | Ericsson | revised |  | S3-224148 |
| S3-223658 | A solution for authorization before allowing access to resources | Ericsson | not treated |  |  |
| S3-223659 | pCR to TR33.740 Evaluation of Solution18 | CATT | not treated |  |  |
| S3-223660 | Add evaluation to Solution #8 | China Mobile (Suzhou) Software | revised |  | S3-224077 |
| S3-223661 | pCR to TR33.740 Update Abbreviations | CATT | approved |  |  |
| S3-223662 | SECOP correction | Nokia, Nokia Shanghai Bell | revised |  | S3-223942 |
| S3-223663 | New solution on protection of data and analytics exchange in roaming case using Secure Multi-party Computation | China Mobile (Suzhou) Software | revised |  | S3-224075 |
| S3-223664 | pCR to TR33.740 Solution for U2U Relay discovery message security | CATT | revised |  | S3-223965 |
| S3-223665 | Update to solution#8 | China Mobile (Suzhou) Software | revised |  | S3-224076 |
| S3-223666 | pCR to TR33.740 Conclusion of key issue #1 | CATT | noted |  |  |
| S3-223667 | pCR to TR33.740 Conclusion of key issue #3 | CATT | noted |  |  |
| S3-223668 | Solution to KI#1 – NSWO in SNPN | Ericsson | approved |  |  |
| S3-223669 | Removal of ENs in Sol#3 | Ericsson | approved |  |  |
| S3-223670 | Conclusions for KI#1 | Ericsson | noted |  |  |
| S3-223671 | CR to TS33.503 PAnF definition and reference point to UDM | CATT | merged |  | S3-223961 |
| S3-223672 | Editor's note resolution on NF instance id in cert profile | Nokia, Nokia Shanghai Bell | agreed |  |  |
| S3-223673 | New WID on Security Aspects of Proximity-based Services in 5GS Phase 2 | CATT | noted |  |  |
| S3-223674 | Adding AAnF critical assets and threats to TR 33.926 | China Mobile (Suzhou) Software | approved |  |  |
| S3-223675 | Conclusion for KI#1 case 2 | China Mobile (Suzhou) Software | revised |  | S3-224137 |
| S3-223676 | Discussion paper on SEPP inter-domain certificate on N32 interface | Ericsson | noted |  |  |
| S3-223677 | Correct SCP certificate profile | Ericsson | agreed |  |  |
| S3-223678 | Correct SCP certificate profile | Ericsson | agreed |  |  |
| S3-223679 | Clarify SEPP intra-domain certificate profile | Ericsson, Nokia, Nokia Shanghai Bell | agreed |  |  |
| S3-223680 | Clarify SEPP intra-domain certificate profile | Ericsson, Nokia, Nokia Shanghai Bell | agreed |  |  |
| S3-223681 | Correct NF certificate profile | Ericsson | agreed |  |  |
| S3-223682 | SEPP to include and verify the source PLMN-ID | Ericsson, Mavenir, Nokia, Nokia Shanghai Bell | revised | S3-221998 | S3-223953 |
| S3-223683 | SEPP to include and verify the source PLMN-ID | Ericsson, Nokia, Nokia Shanghai Bell, Mavenir | noted | S3-221998 |  |
| S3-223684 | Clarification on access token requests for NF Producers of a specific NF type and token-based authorization for indirect communication with delegated discovery | Ericsson | revised |  | S3-223954 |
| S3-223685 | Aligning DNS and ICMP security for non-3GPP access with 3GPP access | Ericsson | endorsed |  |  |
| S3-223686 | Reply LS on User consent for Application Detection | Ericsson | revised |  | S3-223907 |
| S3-223687 | New solution for KI#2 to support authorization of participant NWDAFs in FL | Ericsson | not treated |  |  |
| S3-223688 | Update of Key Issue #3 "Security for AI/ML model storage and sharing" on authorization by the NF which generated the AI/ML model | Ericsson | approved |  |  |
| S3-223689 | Solution on Token based Authorization of AI/ML Model sharing between different vendors(ADRF) | Ericsson | revised |  | S3-224149 |
| S3-223690 | Solution on Authorization of AI/ML Model sharing between different vendors(MTLF) | Ericsson | revised |  | S3-224150 |
| S3-223691 | New solution for KI#3 to support authorization of AI/ML model sharing By NWDAF containing MTLF(local auth) | Ericsson | revised |  | S3-224151 |
| S3-223692 | Security aspects of Support for enhanced mobility by enabling support for idle and connected mode mobility between SNPNs without new network selection | Ericsson | noted |  |  |
| S3-223693 | New Solution to KI#2: Authentication for UE access to hosting network | Ericsson | revised |  | S3-224044 |
| S3-223694 | Preliminary conclusions to KI#2: Authentication for UE access to hosting network | Ericsson | noted |  |  |
| S3-223695 | Update of Key Issue #3: Service access authorization in the "Subscribe-Notify" scenarios | Ericsson | merged |  | S3-223985 |
| S3-223696 | Evaluation for Solution #21 "Certificate solution for NRF validation of NFc for access token requests" | Ericsson | not treated |  |  |
| S3-223697 | Evaluation and update for Solution #22 "Combined certificate and profile solution for NRF validation of NFc for access token requests" | Ericsson | not treated |  |  |
| S3-223698 | Discussion. Key issue #12: Security in Hosted SEPP scenarios | Ericsson | not treated |  |  |
| S3-223699 | Update of Key issue #12: Security in Hosted SEPP scenarios | Ericsson | not treated |  |  |
| S3-223700 | Solution for KI#12: Security in Hosted SEPP scenarios | Ericsson | not treated |  |  |
| S3-223701 | New WID on Security aspects of enhanced support of Non-Public Networks phase 2 | Ericsson | noted |  |  |
| S3-223702 | Correction to authentication mechanism selection | Ericsson, Xiaomi | revised |  | S3-224161 |
| S3-223703 | Renaming 5GPRUK, 5GPRUK ID, PRUK and PRUK ID | Ericsson | revised |  | S3-223956 |
| S3-223704 | Correcting the handling of synchronisation error | Ericsson | revised |  | S3-224133 |
| S3-223705 | Nudm servcie operation correction | Ericsson | revised |  | S3-223962 |
| S3-223706 | CP-PRUK refresh | Ericsson | agreed |  |  |
| S3-223707 | Clarification to multiple registrations in different PLMNs\access types | Ericsson | not pursued |  |  |
| S3-223708 | LS on Evaluation of Digital Signature schemes for the false base station study | Oy LM Ericsson AB | noted |  |  |
| S3-223709 | TargetNFServiceSetId to be part of access token claims | Nokia, Nokia Shanghai Bell | revised | S3-221840 | S3-223955 |
| S3-223710 | Trust in service mesh and standalone SCP implementations | Nokia, Nokia Shanghai Bell | revised |  | S3-224183 |
| S3-223711 | AAnF sending GPSI to internal AKMA AF | China Mobile (Suzhou) Software | not pursued |  |  |
| S3-223712 | Trust in inter-PLMN communication | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-223713 | Conclusion on KI1 | Nokia, Nokia Shanghai Bell | merged |  | S3-223984 |
| S3-223714 | KI3 update Subscribe-Notify – EN resolution | Nokia, Nokia Shanghai Bell | revised |  | S3-223985 |
| S3-223715 | Key Issue on KAF refresh | Samsung, Nokia, Nokia Shanghai Bell, OPPO, ZTE | noted |  |  |
| S3-223716 | New solution on AKMA KAF refresh | Samsung | not treated |  |  |
| S3-223717 | Resolving EN and adding evaluation for solution#13 | Samsung | revised |  | S3-224030 |
| S3-223718 | Resolving EN and adding evaluation for solution#9 | Samsung | approved |  |  |
| S3-223719 | Resolving EN and adding evaluation for solution#6 | Samsung | revised |  | S3-224019 |
| S3-223720 | Conclusion on KI#1 | Samsung | merged |  | S3-224013 |
| S3-223721 | Key Issue for secure ProSe multi-path transmission for UE-to-Network relay | Samsung | noted |  |  |
| S3-223722 | New solution for hop-by-hop security establishment for the UE-to-UE Relay | Samsung | revised |  | S3-223966 |
| S3-223723 | Updates to solution#19 and resolving EN #2 and #3 | Samsung | approved |  |  |
| S3-223724 | Updates to solution#19 and resolving EN #5 | Samsung | revised |  | S3-223976 |
| S3-223725 | Resolving EN in solution#4 | Samsung | not treated |  |  |
| S3-223726 | Resolving EN in solution#3 | Samsung | not treated |  |  |
| S3-223727 | Resolving EN and adding evaluation for solution#21 | Samsung | not treated |  |  |
| S3-223728 | Discussion paper on authentication mechanism selection | Samsung | noted |  |  |
| S3-223729 | Conclusion for KI#2.2 | Samsung | not treated |  |  |
| S3-223730 | Living document for SERP: draftCR to TS 33.501 on the Protection of the RRC Resume Request message | Samsung | not pursued |  |  |
| S3-223731 | Reply LS on authenticity and replay protection of system information | Samsung, Apple, CableLabs | noted |  |  |
| S3-223732 | Conclusion for key issue#2 | Samsung, Intel, Apple | noted |  |  |
| S3-223733 | Updates to Solution#7 SI verification using Digital Signatures | Samsung | not treated |  |  |
| S3-223734 | Resolving EN of solution#7 (TR 33.809) | Samsung | not treated |  |  |
| S3-223735 | [IAB] IAB inter-CU topology adaptation procedure | Samsung | not pursued |  | - |
| S3-223736 | [MBS] Updates to solution#1 in TR 33.883 | Samsung | noted |  |  |
| S3-223737 | [MBS] Conclusion for Key Issue#1 | Samsung | noted |  |  |
| S3-223738 | New Solution on User Authorization in API Invocation | Samsung | not treated |  |  |
| S3-223739 | New Solution on Resource owner Authorization in API Invocation using AKMA | Samsung | not treated |  |  |
| S3-223740 | Discussion on protection of the URSP rules from HPLMN | Samsung | noted |  |  |
| S3-223741 | KI4 Sol SCP authorization check by NRF | Nokia, Nokia Shanghai Bell | revised | S3-222809 | S3-224070 |
| S3-223742 | DDNFM Selection during U2N Relay Discovery Security Procedure | Xiaomi Technology, Ericsson | not pursued |  | - |
| S3-223743 | Match Report in U2N Relay Discovery Security Procedure | Xiaomi Technology | revised |  | S3-223958 |
| S3-223744 | Security Method Check during U2N Relay Discovery Procedure | Xiaomi Technology | not pursued |  |  |
| S3-223745 | Updates to Key Definitions | Xiaomi Technology | not pursued |  |  |
| S3-223746 | 33.893: Additional Roles for Authorization in KI#2 | Xiaomi Technology | revised |  | S3-224128 |
| S3-223747 | 33.893: Update to Key Issue #4 | Xiaomi Technology | approved |  |  |
| S3-223748 | 33.893: Resolve the Editor’s Notes in Solution #2 | Xiaomi Technology | approved |  |  |
| S3-223749 | 33.893: Resolve the Editor’s Note in Solution #4 | Xiaomi Technology | not treated |  |  |
| S3-223750 | 33.893: Evaluation for Solution #4 | Xiaomi Technology | not treated |  |  |
| S3-223751 | 33.893: Evaluation for Solution #6 | Xiaomi Technology | not treated |  |  |
| S3-223752 | 33.893: New Solution on Security Policy based Protection for Ranging Communication | Xiaomi Technology | revised |  | S3-224130 |
| S3-223753 | 33.893: New Solution on Security Policy based Protection for Ranging Result sent to SL Positioning Client UE | Xiaomi Technology | revised |  | S3-224131 |
| S3-223754 | 33.893: New Solution on Authorization of SL Positioning Client UE for Obtaining Ranging Result | Xiaomi Technology | not treated |  |  |
| S3-223755 | 33.893: New Solution on Token-based Authorization of the Role of the UE during Discovery | Xiaomi Technology | not treated |  |  |
| S3-223756 | 33.893: New Solution on Role Verification during Discovery based on Discovery Keys | Xiaomi Technology | not treated |  |  |
| S3-223757 | 33.896: Update to Solution #1 | Xiaomi Technology | approved |  |  |
| S3-223758 | 33.896: Update to Solution #2 | Xiaomi Technology | approved |  |  |
| S3-223759 | 33.896: Solution on Obtaining User Consent with Mobility in RAN for KI#2 | Xiaomi Technology | noted |  |  |
| S3-223760 | 33.896: Solution on Obtaining User Consent with Mobility in SN for KI#2 | Xiaomi Technology | noted |  |  |
| S3-223761 | 33.700-28: Update to Key Issue #1 | Xiaomi Technology | revised |  | S3-224072 |
| S3-223762 | 33.700-28: New Key Issue on Protection of UE Unreachability Period retrieved by the UE | Xiaomi Technology | noted |  |  |
| S3-223763 | Update to solution #8 in TR 33.740 | Beijing Xiaomi Mobile Software | not treated |  |  |
| S3-223764 | Update to solution #9 in TR 33.740 | Beijing Xiaomi Mobile Software | not treated |  |  |
| S3-223765 | Update to solution #20 in TR 33.740 | Beijing Xiaomi Mobile Software | revised |  | S3-223977 |
| S3-223766 | New solution on security for discovery integrated into PC5 link establishment | Beijing Xiaomi Mobile Software | revised |  | S3-223967 |
| S3-223767 | New solution on Ranging/SL Positioning discovery and link establishment procedure for V2X capable UEs | Beijing Xiaomi Mobile Software | not treated |  |  |
| S3-223768 | Update to solution #7 in TR 33.741 | Beijing Xiaomi Mobile Software | approved |  |  |
| S3-223769 | Conclusion on KI#1 | Beijing Xiaomi Mobile Software | merged |  | S3-224013 |
| S3-223770 | New solution on User Consent for UE Data Exposure to HPLMN in the Roaming case | Beijing Xiaomi Mobile Software | approved |  |  |
| S3-223771 | New solution on User Consent for UE Data Exposure to VPLMN in the Roaming case | Beijing Xiaomi Mobile Software | approved |  |  |
| S3-223772 | Correction to privacy protection of UP-PRUK ID and RSC in DCR | Beijing Xiaomi Mobile Software | merged |  | S3-223957 |
| S3-223773 | CR\_33.501 R15 Update A.18 to define SoR-XMAC-IUE | Xiaomi Communication | not pursued |  |  |
| S3-223774 | CR\_33.501 R15 Update A.20 to define UPU-XMAC-IUE | Xiaomi Communication | not pursued |  |  |
| S3-223775 | CR\_33.501 R16 Update A.18 to define SoR-XMAC-IUE (mirror) | Xiaomi Communication | not pursued |  |  |
| S3-223776 | CR\_33.501 R16 Update A.20 to define UPU-XMAC-IUE (mirror) | Xiaomi Communication | not pursued |  |  |
| S3-223777 | CR\_33.501 R17 Remove the redundant part of Figure I.2.3.2-1 | Xiaomi Communication | agreed |  |  |
| S3-223778 | CR\_33.501 R17 Update A.17 for SoR transparent container | Xiaomi Communication | revised |  | S3-223936 |
| S3-223779 | CR\_33.501 R17 Update A.18 to define SoR-XMAC-IUE (mirror) | Xiaomi Communication | revised |  | S3-223935 |
| S3-223780 | CR\_33.501 R17 Update A.20 to define UPU-XMAC-IUE (mirror) | Xiaomi Communication | revised |  | S3-223937 |
| S3-223781 | CR\_33.501 R17 Update step 15 of clause I.2.2.2.1 | Xiaomi Communication | agreed |  |  |
| S3-223782 | CR\_33.501 R17 Update Subscription and unsubscription procedure of NSACF notification service | Xiaomi Communication | merged |  | S3-223926 |
| S3-223783 | KI #1, New Sol on UE profile based 5GC assistance information exposure authorization | Xiaomi Communication | revised |  | S3-223981 |
| S3-223784 | KI #2.2, New sol on authentication mechanism selection method for edge scenarios | Xiaomi Communication | not treated |  |  |
| S3-223785 | KI#1 New sol AKMA roaming for external AF in the Data Network | Xiaomi Communication | revised |  | S3-224071 |
| S3-223786 | KI#1 New sol on enhanced slice aware information protection | Xiaomi Communication | not treated |  |  |
| S3-223787 | KI#1 New sol on Integrity protection for network triggered UE capability indication procedure. | Xiaomi Communication | not treated |  |  |
| S3-223788 | KI#1 New sol on Integrity protection for UE initiated capability indication procedure | Xiaomi Communication | not treated |  |  |
| S3-223789 | KI#2 New sol Mutual authentication between UE and hosting network | Xiaomi Communication | noted |  |  |
| S3-223790 | KI#2, New Sol OAuth 2.0 based API invocation procedure | Xiaomi Communication | not treated |  |  |
| S3-223791 | KI#2, New Sol on User authorization revocation for API invocation procedure | Xiaomi Communication | not treated |  |  |
| S3-223792 | KI#2, New Sol UE credential based API invocation procedure | Xiaomi Communication | not treated |  |  |
| S3-223793 | New KI on Protect prioritized list of hosting networks in hosting network scenarios | Xiaomi Communication | noted |  |  |
| S3-223794 | New Sol on Protection of prioritized list of hosting networks | Xiaomi Communication | noted |  |  |
| S3-223795 | Resolve EN in Sol #5 | Xiaomi Communication | not treated |  |  |
| S3-223796 | Update to KI#1 | Xiaomi Communication | not treated |  |  |
| S3-223797 | KI9 update to sol17 on authorization mechanism negotiation | Nokia, Nokia Shanghai Bell | noted |  | - |
| S3-223798 | KI10 solution on N32 security profiles | Nokia, Nokia Shanghai Bell | revised |  | S3-224108 |
| S3-223799 | Proposal for a KI on injection of authentication data | Nokia, Nokia Shanghai Bell | withdrawn |  |  |
| S3-223800 | Discussion paper on a way forward for LS on protection of the URSP rules from HPLM | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223801 | Reply to LS on protection of the URSP rules from HPLMN | Nokia, Nokia Shanghai Bell | merged |  | S3-223911 |
| S3-223802 | Resolution to editor’s note in solution 1 concerning threat mitigation | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223803 | Resolution to editor’s note in solution 1 concerning the provisioning of security material | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223804 | Proposal for a solution for KI#1 - Anonymous authentication during connection establishment in trusted non-3GPP network access | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-223805 | Proposal for a solution to KI#2 - PALS authentication through onboarding procedure and afterwards registration | Nokia, Nokia Shanghai Bell | revised |  | S3-224045 |
| S3-223806 | Proposal for a solution to KI#2 - PALS authentication through onboarding procedure and afterwards registration | Nokia, Nokia Shanghai Bell | revised |  | S3-224046 |
| S3-223807 | Discussion paper on restriction for multi registrations in two PLMNs | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223808 | Discussin paper on control on NSSAA procedures for multi registrations in two PLMNs | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223809 | Add restriction for multi registrations in two PLMNs | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223810 | control on NSSAA procedures for multi registrations in two PLMNs | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223811 | Add restriction for multi registrations in two PLMNs | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223812 | control on NSSAA procedures for multi registrations in two PLMNs | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223813 | update to KI#2 temporary network slice | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223814 | solution for KI#2 temporary network slice for NSSAA | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223815 | update to KI#3 network slice admission control | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223816 | security solution for KI#3 network slice admission control | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223817 | new KI for path switching between two indirect network communication paths | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223818 | security solution for path switching between two indirect network communication paths | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223819 | Discussion on Serving Network Name used in ProSe | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223820 | use relay UE SNN to generate AV for ProSe authentication | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223821 | use remote UE SNN to generate AV for ProSe authentication | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223822 | Discussion on RID used in ProSe | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223823 | include RID of AUSF in DCR | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223824 | include RID of AUSF in CP PRUK ID | Nokia, Nokia Shanghai Bell | not pursued |  |  |
| S3-223825 | Clarification on N32-f connection establishment with TLS - SNPN use case | Nokia, Nokia Shanghai Bell | withdrawn | S3-221841 |  |
| S3-223826 | Updating Solution #9: Concealing length of SUPIs in SUCIs by padding the SUPIs | Oy LM Ericsson AB | not treated |  |  |
| S3-223827 | PCR to TR33.876 - Addition of Key Issue - Protection of private keys at rest | Vodafone España SA | merged |  | S3-224138 |
| S3-223828 | PCR to 33.876 - Addition of Key Issue: security of internal NF service communicaitons | Vodafone España SA | revised |  | S3-224138 |
| S3-223829 | WID on SBA security | Nokia, Nokia Shanghai Bell | revised | S3-222254 | S3-224087 |
| S3-223830 | New Key issue on the security of the information transfer of the RAN AI/ML framework | Ericsson | noted |  |  |
| S3-223831 | KAF lifetime recommendations and Ua\* protocol requirements | Ericsson | not pursued |  |  |
| S3-223832 | New solution for AKMA roaming with VPLMN AKMA Support NF for inbound roamers | Ericsson | revised |  | S3-224141 |
| S3-223833 | Reply LS on Authentication Result Removal | Ericsson | revised |  | S3-223908 |
| S3-223834 | New WID on IETF OSCORE protocol profiles for GBA and AKMA | Ericsson | revised |  | S3-224132 |
| S3-223835 | Living document for DUMMY: draftCR to TS 33.535, IETF OSCORE as AKMA Ua\* protocol | Ericsson, Deutsche Telekom | not pursued |  |  |
| S3-223836 | Solution #11 updates | Ericsson | approved |  |  |
| S3-223837 | Solution #11 evalution | Ericsson | revised |  | S3-224020 |
| S3-223838 | Solution #12 updates | Ericsson | approved |  | - |
| S3-223839 | Solution #12 evalution | Ericsson | revised |  | S3-224021 |
| S3-223840 | Conlusions | Ericsson | revised |  | S3-224013 |
| S3-223841 | Resolve 4 ENs in Solution#1 | Ericsson | revised |  | S3-224142 |
| S3-223842 | Add Evaluation for Solution#1 | Ericsson | revised |  | S3-224143 |
| S3-223843 | New solution: How to avoid e2ae limitation and achieve e2e security for IMS Data Channel | Ericsson | revised |  | S3-224124 |
| S3-223844 | Reply LS on the IMS Data Channel Security Mode | Ericsson | revised |  | S3-223913 |
| S3-223845 | Clarification on AF authorization for the NSACF notification procedure | Ericsson | revised |  | S3-223926 |
| S3-223846 | Alignment of NSACF notification procedure with existing procedures | Ericsson | not pursued |  |  |
| S3-223847 | Living document for SERP: draftCR to TS 33.501 on the Protection of the RRC Resume Request message | Ericsson, Apple | noted |  |  |
| S3-223848 | Reply LS on Time Synchronization Status notification towards UE(s) | Ericsson | merged |  | S3-223915 |
| S3-223849 | EN deletion in KI5 | Nokia, Nokia Shanghai Bell | merged |  | S3-224100 |
| S3-223850 | pCR to 33.875 - Update of Key Issue 10 | Vodafone España SA | revised |  | S3-224111 |
| S3-223851 | Addressing EN in Solution 2 | CableLabs | revised |  | S3-224049 |
| S3-223852 | Addressing EN in Solution 3 | CableLabs | revised |  | S3-224050 |
| S3-223853 | Addressing EN in Solution 4 | CableLabs | revised |  | S3-224051 |
| S3-223854 | Authentication for UE behind 5G-RG and FN-RG using NSWO | CableLabs | not pursued |  |  |
| S3-223855 | KI11 threat clarification | Nokia, Nokia Shanghai Bell | not treated |  |  |
| S3-223856 | Conclusions for KI#1 | CableLabs, Nokia, Nokia Shanghai Bell | revised |  | S3-224052 |
| S3-223857 | Key issue on authentication of UE behind RG | CableLabs, Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223858 | Solution for authentication of UE behind RG using NSWO | CableLabs | noted |  |  |
| S3-223859 | Key issue on authentication of N5CW devices behind RG | CableLabs, Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-223860 | Verification of NSSAIs for preventing slice attack | CableLabs, Ericsson, Nokia, Nokia Shanghai Bell | agreed |  |  |
| S3-223861 | Resolving ENs in solution 6.16 | CableLabs | revised |  | S3-224099 |
| S3-223862 | Response LS on Identifier availability for Lawful Interception during Inter-PLMN handover | S3i220660 | noted |  |  |
| S3-223863 | Key Issue #1 Update | Lenovo, Nokia, Nokia Shanghai Bell, Rakuten Mobile Inc., Interdigital, US National Security Agency, Motorola Solutions, Johns Hopkins University APL, Intel, Center for Internet Security, China Mobile, ZTE, CableLabs, China Telecom, Verizon, Convida Wirele | revised |  | S3-224031 |
| S3-223864 | Editorial Update for TR 33.894 | Lenovo | approved |  |  |
| S3-223865 | Update to Tenet #5 | Lenovo, US National Security Agency, Charter Communications | revised |  | S3-224127 |
| S3-223866 | Update to Tenet #6 | Lenovo, US National Security Agency, Charter Communications | noted |  |  |
| S3-223867 | New solution: PKCE flow based authorization | DOCOMO Communications Lab. | not treated |  |  |
| S3-223868 | Update to Tenet #7 | Lenovo, US National Security Agency, Charter Communications | revised |  | S3-224126 |
| S3-223869 | TR rapporteur updates - editorials | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-223870 | Update to Solution #1 in ID Privacy | Lenovo | revised |  | S3-224033 |
| S3-223871 | new solution: Subscriber vs. user authorization | DOCOMO Communications Lab. | not treated |  |  |
| S3-223872 | Update to Solution #8 in HONTRA | Lenovo | revised |  | S3-224022 |
| S3-223873 | Conclusion to use oAuth based authorization | DOCOMO Communications Lab. | noted |  |  |
| S3-223874 | Update to Solution #9 in eNA Ph3 | Lenovo | not treated |  |  |
| S3-223875 | Cyber attack detection | Lenovo | not treated |  |  |
| S3-223876 | Update to Solution #4 in SNAAPPY | Lenovo | not treated |  |  |
| S3-223877 | Solution to address KI#2 in SNAAPPY | Lenovo | not treated |  |  |
| S3-223878 | Update to KI#1 Providing VPLMN slice information to roaming UE | Lenovo | not treated |  |  |
| S3-223879 | Update to Solution #2 in UAS | Lenovo | approved |  |  |
| S3-223880 | Remove password complexity criteria, password expiry and password history requirements | Ericsson | revised |  | S3-223931 |
| S3-223881 | Solution to address KI#4 in 5WWC | Lenovo | approved |  |  |
| S3-223882 | Resolving ENs in solution 6.13 | CableLabs | noted |  |  |
| S3-223883 | Addressing the editor’s note in 6.27.2.1.1 of Sol#27 | CableLabs | not treated |  |  |
| S3-223884 | Remove password complexity criteria, password expiry and password history requirements | Ericsson | revised |  | S3-223932 |
| S3-223885 | Addressing EN on NR Repeater in 6.27.2.2.4 of Sol#27 | CableLabs | not treated |  |  |
| S3-223886 | Addressing the editor’s note in 6.27.2.2.1of Sol#27 | CableLabs, Deutsche Telekom, Philips International B.V. | not treated |  |  |
| S3-223887 | Key issue on authentication of AUN3 device without 5G credentials | CableLabs | not treated |  |  |
| S3-223888 | pCR to 33.875 - Update to Key Issue 13 | Vodafone España SA | not treated |  |  |
| S3-223889 | [MCPTT] 33179 R13 Incorrect example | Airbus | revised |  | S3-223944 |
| S3-223890 | [MCSec] 33180 R14 Incorrect example | Airbus | agreed |  | - |
| S3-223891 | [eMCSec] Mirror 33180 R14 Incorrect example | Airbus | agreed |  |  |
| S3-223892 | [MCXSec] Mirror 33180 R14 Incorrect example | Airbus | agreed |  |  |
| S3-223893 | [MCXSec2] Mirror 33180 R14 Incorrect example | Airbus | agreed |  |  |
| S3-223894 | KI #3 update: authorization synchronization | MITRE Corporation | noted |  |  |
| S3-223895 | Proposal Solution #XX ACME use in 3GPP | Google Inc. | noted |  |  |
| S3-223896 | [MCPTT] 33179 R13 Incorrect reference | Airbus | agreed |  |  |
| S3-223897 | [MCSec] 33180 R14 Incorrect reference | Airbus | agreed |  |  |
| S3-223898 | [eMCSec] 33180 R15 Incorrect reference (Mirror) | Airbus | agreed |  |  |
| S3-223899 | [MCXSec] 33180 R16 Incorrect reference (Mirror) | Airbus | agreed |  |  |
| S3-223900 | [MCXSec2] 33180 R17 Incorrect reference (Mirror) | Airbus | agreed |  |  |
| S3-223901 | [MCXSec3] 33180 R18 Incorrect reference (Mirror) | Airbus | withdrawn |  |  |
| S3-223902 | Specification of the 256-bit air interface algorithms | ETSI SAGE | postponed |  |  |
| S3-223903 | LS Reply on UE\_NOT\_FOUND cause code | InterDigital, Europe, Ltd. | revised | S3-223317 | - |
| S3-223904 | Reply LS on User Consent for EDGEAPP | Huawei, HiSilicon | approved | S3-223482 | - |
| S3-223905 | Reply LS to Reply LS on the user consent for trace reporting | Nokia, Nokia Shanghai Bell | noted | S3-223229 | - |
| S3-223906 | Reply to: LS on user consent of Non-public Network | Qualcomm | noted | - | - |
| S3-223907 | Reply LS on User consent for Application Detection | Ericsson | approved | S3-223686 | - |
| S3-223908 | Reply LS on Authentication Result Removal | Ericsson | noted | S3-223833 | - |
| S3-223909 | Reply LS on PLMN ID used in Roaming Scenarios | Nokia, Nokia Shanghai Bell | withdrawn | - | - |
| S3-223910 | LS to GSMA DESS on SEPP certificates | Nokia, Nokia Shanghai Bell | approved | S3-223386 | - |
| S3-223911 | Reply LS on protection of the URSP rules from HPLMN | Qualcomm Incorporated | approved | S3-223379 | - |
| S3-223912 | Reply LS on impact to URSP rules enforcement report to 5GC | vivo | noted | S3-223298 | - |
| S3-223913 | Reply LS on the IMS Data Channel Security Mode | Ericsson | approved | S3-223844 | - |
| S3-223914 | Reply LS on Network federation interface for Telco edge consideration | Huawei, HiSilicon | approved | S3-223584 | - |
| S3-223915 | Reply LS on Time Synchronization Status notification towards UE(s) | Nokia, Nokia Shanghai Bell,Ericsson | noted | S3-223213 | - |
| S3-223916 | Reply to: LS to inform about the new GSMA Task Force | ORANGE | noted | - | - |
| S3-223917 | CR on control-plane procedure in MBS | Huawei, HiSilicon | not pursued | S3-223527 | - |
| S3-223918 | Reply LS on the impact of MSK update on MBS multicast session update procedure | Huawei, HiSilicon | noted | S3-223528 | - |
| S3-223919 | Reply LS on Security architecture for 5G multicast/broadcast services | Huawei, HiSilicon | approved | S3-223530 | - |
| S3-223920 | CR on authentication in user plane procedure in MBS | Huawei, HiSilicon,Qualcomm | agreed | S3-223529 | - |
| S3-223921 | LS reply on AKMA API | Nokia, Nokia Shanghai Bell | approved | S3-223265 | - |
| S3-223922 | Rel-15 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | agreed | S3-223646 | - |
| S3-223923 | Rel-16 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | agreed | S3-223647 | - |
| S3-223924 | Rel-17 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | agreed | S3-223648 | - |
| S3-223925 | CR on AES-GCM/GMAC in IMS SIP security | Apple | not pursued | S3-223619 | - |
| S3-223926 | Clarification on AF authorization for the NSACF notification procedure | Ericsson | not pursued | S3-223845 | - |
| S3-223927 | Resolving the EN on CAA level ID during UUAA procedures | Qualcomm Incorporated | withdrawn | - | - |
| S3-223928 | Resolving the ENs on CAA level ID during revocation | Qualcomm Incorporated | agreed | S3-223333 | - |
| S3-223929 | Clarification on IP\_FWD\_DISABLING | Huawei, HiSilicon | agreed | S3-223604 | - |
| S3-223930 | Clarification on IP\_FWD\_DISABLING | Huawei, HiSilicon | agreed | S3-223605 | - |
| S3-223931 | Remove password complexity criteria, password expiry and password history requirements | Ericsson | not pursued | S3-223880 | - |
| S3-223932 | Remove password complexity criteria, password expiry and password history requirements | Ericsson | not pursued | S3-223884 | - |
| S3-223933 | Adding non-Uu user plane text cases to TS 33.511 | Qualcomm Incorporated | approved | - | - |
| S3-223934 | LS on IMS SCAS to GSMA | Huawei, HiSilicon | approved | S3-223583 | - |
| S3-223935 | CR\_33.501 R17 Update A.18 to define SoR-XMAC-IUE (mirror) | Xiaomi Communication | agreed | S3-223779 | - |
| S3-223936 | CR\_33.501 R17 Update A.17 for SoR transparent container | Xiaomi Communication | agreed | S3-223778 | - |
| S3-223937 | CR\_33.501 R17 Update A.20 to define UPU-XMAC-IUE (mirror) | Xiaomi Communication | agreed | S3-223780 | - |
| S3-223938 | UPU procedure align with stage 3 for AMF not registered case | Nokia, Nokia Shanghai Bell | not pursued | S3-223264 | - |
| S3-223939 | Conclusion on KI2.2 Authentication mechanism selection | Huawei, HiSilicon | noted | S3-223586 | - |
| S3-223940 | Method negotiation using TLS 1.3 | Qualcomm Incorporated | approved | S3-223362 | - |
| S3-223941 | clarification on PLMN ID verification in SNPN | Huawei, HiSilicon | agreed | S3-223606 | - |
| S3-223942 | SECOP correction | Nokia, Nokia Shanghai Bell | not pursued | S3-223662 | - |
| S3-223943 | SECOP correction | Nokia | withdrawn | - | - |
| S3-223944 | [MCPTT] 33179 R13 Incorrect example | Airbus | revised | S3-223889 | S3-224172 |
| S3-223945 | Clarification of brute force mitigation mechanism verification | BSI (DE) | withdrawn | - | - |
| S3-223946 | Clarification of privilege escalation methods to check for | BSI (DE) | withdrawn | - | - |
| S3-223947 | Clarification of service reachability restriction verification | BSI (DE) | withdrawn | - | - |
| S3-223948 | LS on NSSAA procedures for multiple registrations | Huawei | noted | - | - |
| S3-223949 | User plane security for Non-SBA based interfaces | Nokia, Nokia Shanghai Bell | agreed | S3-223394 | - |
| S3-223950 | CR on Kiab handling in IAB migration\_old psk | Huawei, HiSilicon | not pursued | S3-223519 | - |
| S3-223951 | Clarification on N32-f connection establishment with TLS | Nokia, Nokia Shanghai Bell | agreed | S3-223203 | - |
| S3-223952 | Presentation from ENISA on EU certification scheme | ENISA | noted | - | - |
| S3-223953 | SEPP to include and verify the source PLMN-ID | Ericsson, Mavenir, Nokia, Nokia Shanghai Bell | not pursued | S3-223682 | - |
| S3-223954 | Clarification on access token requests for NF Producers of a specific NF type and token-based authorization for indirect communication with delegated discovery | Ericsson | not pursued | S3-223684 | - |
| S3-223955 | TargetNFServiceSetId to be part of access token claims | Nokia, Nokia Shanghai Bell | agreed | S3-223709 | - |
| S3-223956 | Renaming 5GPRUK, 5GPRUK ID, PRUK and PRUK ID | Ericsson,China Telecom, Huawei, HiSilicon,CATT | agreed | S3-223703 | - |
| S3-223957 | Corrections in privacy protection of 5G ProSe UE-to-Network relay procedure | Qualcomm Incorporated,eijing Xiaomi Mobile Software | agreed | S3-223368 | - |
| S3-223958 | Match Report in U2N Relay Discovery Security Procedure | Xiaomi Technology,Huawei, HiSilicon | agreed | S3-223743 | - |
| S3-223959 | DTLS for AKMA WID | ZTE Corporation | agreed | S3-223445 | - |
| S3-223960 | Clarification of subscription information in PAnF | ZTE Corporation | agreed | S3-223429 | - |
| S3-223961 | Add functionality description of PAnF | ZTE Corporation,CATT | agreed | S3-223428 | - |
| S3-223962 | Nudm servcie operation correction | Ericsson | not pursued | S3-223705 | - |
| S3-223963 | Update KI#5 | OPPO | approved | S3-223247 | - |
| S3-223964 | New solution to establish UE-to-UE security | Huawei, HiSilicon | approved | S3-223469 | - |
| S3-223965 | pCR to TR33.740 Solution for U2U Relay discovery message security | CATT | approved | S3-223664 | - |
| S3-223966 | New solution for hop-by-hop security establishment for the UE-to-UE Relay | Samsung | approved | S3-223722 | - |
| S3-223967 | New solution on security for discovery integrated into PC5 link establishment | Beijing Xiaomi Mobile Software | approved | S3-223766 | - |
| S3-223968 | Evaluate to the solution #15 | Huawei, HiSilicon | approved | S3-223477 | - |
| S3-223969 | Update TR 33.740 solution #1 | InterDigital, Europe, Ltd. | approved | S3-223310 | - |
| S3-223970 | Update to solution#5 in TR 33.740 - align with SA2 | China Telecom Corporation Ltd. | approved | S3-223400 | - |
| S3-223971 | Draft TR 33.740 | CATT | approved | - | - |
| S3-223972 | Update to ProSe Security Sol#6 | OPPO | approved | S3-223451 | - |
| S3-223973 | Evaluation to solution #3 | Ericsson | approved | S3-223626 | - |
| S3-223974 | pCR to TR33.740 Update Solution16 for removing ENs | CATT | approved | S3-223636 | - |
| S3-223975 | pCR to TR33.740 Evaluation of Solution16 | CATT | approved | S3-223643 | - |
| S3-223976 | Updates to solution#19 and resolving EN #5 | Samsung | approved | S3-223724 | - |
| S3-223977 | Update to solution #20 in TR 33.740 | Beijing Xiaomi Mobile Software | approved | S3-223765 | - |
| S3-223978 | Draft TR 33.898 | OPPO | approved | - | - |
| S3-223979 | LS on clarification for user consent for AI/ML | Huawei | noted | - | - |
| S3-223980 | New Solution reusing existing mechanism for authorization of 5GC assistance information exposure to AF | Huawei, HiSilicon | approved | S3-223481 | - |
| S3-223981 | KI #1, New Sol on UE profile based 5GC assistance information exposure authorization | Xiaomi Communication | approved | S3-223783 | - |
| S3-223982 | Addressing the editor's note in sol#1 | Huawei, HiSilicon | approved | S3-223531 | - |
| S3-223983 | Draft TR 33.875 | Nokia | approved | - | - |
| S3-223984 | Conclusion on KI#1 in TR 33.875 | Mavenir,Nokia,Huawei | approved | S3-223240 | - |
| S3-223985 | KI3 update Subscribe-Notify – EN resolution | Nokia, Nokia Shanghai Bell, Ericsson, Huaweil | approved | S3-223714 | - |
| S3-223986 | Evaluation for Solution #3 | Nokia, Nokia Shanghai Bell | approved | S3-223380 | - |
| S3-223987 | Evaluation for Solution #11 | Nokia, Nokia Shanghai Bell | approved | S3-223381 | - |
| S3-223988 | Further Analysis for KI#4 in TR 33.875 | Mavenir,Nokia, Nokia Shanghai Bell | approved | S3-223241 | - |
| S3-223989 | Conclusion for KI#4 in TR 33.875 | Mavenir,Nokia, Nokia Shanghai Bell | approved | S3-223242 | - |
| S3-223990 | Solution on KI#11 in TR 33.875 | Mavenir,Nokia, Nokia Shanghai Bell | approved | S3-223330 | - |
| S3-223991 | Resolving EN and evaluation for Solution #12 | Nokia, Nokia Shanghai Bell | approved | S3-223383 | - |
| S3-223992 | address EN for solution #8 and add evaluation | Huawei, HiSilicon | approved | S3-223514 | - |
| S3-223993 | address EN for solution #9 and add evaluation | Huawei, HiSilicon | approved | S3-223515 | - |
| S3-223994 | Update to solution #3 | Huawei, HiSilicon | approved | S3-223543 | - |
| S3-223995 | Conclusion on UE-to-UE relay Authorisation | Huawei, HiSilicon | approved | S3-223471 | - |
| S3-223996 | New KI: Support for Emergency service over UE-to-Network Relaying | Ericsson | approved | S3-223623 | - |
| S3-223997 | A new solution for UE-to-UE Relay discovery message protection for Model A discovery | Qualcomm Incorporated | approved | S3-223369 | - |
| S3-223998 | A new solution for UE-to-UE Relay discovery message protection for Model B discovery | Qualcomm Incorporated | approved | S3-223370 | - |
| S3-223999 | A new solution for secure PC5 link establishment for UE-to-UE Relay | Qualcomm Incorporated | approved | S3-223371 | - |
| S3-224000 | Update TR 33.740 solution #12 | InterDigital, Europe, Ltd. | approved | S3-223312 | - |
| S3-224001 | Update TR 33.740 solution #13 | InterDigital, Europe, Ltd. | approved | S3-223313 | - |
| S3-224002 | Resolve EN of Direct Communication Invite in Solution3 | Ericsson | approved | S3-223629 | - |
| S3-224003 | pCR to TR33.740 Update Solution17 for removing ENs | CATT | approved | S3-223638 | - |
| S3-224004 | pCR to TR33.740 Evaluation of Solution17 | CATT | approved | S3-223644 | - |
| S3-224005 | Support Emergency Service over UE-to-Network Relay | Ericsson | approved | S3-223624 | - |
| S3-224006 | ProSe - Evaluation Solution #10 | Philips International B.V. | approved | S3-223276 | - |
| S3-224007 | Update TR 33.740 solution #14 | InterDigital, Europe, Ltd. | approved | S3-223314 | - |
| S3-224008 | Add Evaluation for ProSe Security Sol#6 | OPPO | noted | S3-223453 | - |
| S3-224009 | Evaluate to the solution #5 | Huawei, HiSilicon | approved | S3-223476 | - |
| S3-224010 | AKMA - Evaluation Solution #10 | Philips International B.V. | approved | S3-223287 | - |
| S3-224011 | Update KI#1 | Huawei, HiSilicon | approved | S3-223511 | - |
| S3-224012 | MEC - New key issue on AF specific identifier | Apple | not treated | S3-223616 | - |
| S3-224013 | Conlusions | Ericsson | approved | S3-223840 | - |
| S3-224014 | solution 1 evaluation | Nokia, Nokia Shanghai Bell | approved | S3-223273 | - |
| S3-224015 | Adding an evaluation of solution #5 | Qualcomm Incorporated | approved | S3-223360 | - |
| S3-224016 | draft TR 33.741 | Huawei | approved | - | - |
| S3-224017 | Add some context to solution #3 | ZTE Corporation | approved | S3-223438 | - |
| S3-224018 | Update solution2 | Huawei, HiSilicon | approved | S3-223502 | - |
| S3-224019 | Resolving EN and adding evaluation for solution#6 | Samsung | approved | S3-223719 | - |
| S3-224020 | Solution #11 evalution | Ericsson | approved | S3-223837 | - |
| S3-224021 | Solution #12 evalution | Ericsson | approved | S3-223839 | - |
| S3-224022 | Update to Solution #8 in HONTRA | Lenovo | approved | S3-223872 | - |
| S3-224023 | Conclusion on KI2.3 Authentication and Authorization between V-ECS and H-ECS | Huawei, HiSilicon | approved | S3-223585 | - |
| S3-224024 | Draft TR 33.739 | Huawei | approved | - | - |
| S3-224025 | Resolving ENs in solution #13 | Ericsson | approved | S3-223653 | - |
| S3-224026 | Evaluation of solution #13 | Ericsson | approved | S3-223654 | - |
| S3-224027 | Evaluation of solution #14 | Ericsson | approved | S3-223655 | - |
| S3-224028 | Evaluation to solution 18 | Huawei, HiSilicon | approved | S3-223551 | - |
| S3-224029 | New solution for KI#5 | OPPO | approved | S3-223248 | - |
| S3-224030 | Resolving EN and adding evaluation for solution#13 | Samsung | approved | S3-223717 | - |
| S3-224031 | Key Issue #1 Update | Lenovo, Nokia, Nokia Shanghai Bell, Rakuten Mobile Inc., Interdigital, US National Security Agency, Motorola Solutions, Johns Hopkins University APL, Intel, Center for Internet Security, China Mobile, ZTE, CableLabs, China Telecom, Verizon, Convida Wirele | approved | S3-223863 | - |
| S3-224032 | Address EN and add evaluation for solution 9 | ZTE Corporation | approved | S3-223432 | - |
| S3-224033 | Update to Solution #1 in ID Privacy | Lenovo | approved | S3-223870 | - |
| S3-224034 | Solution for Trusted non-3GPP Access for SNPN | Lenovo | approved | S3-223218 | - |
| S3-224035 | Solution for Untrusted non-3GPP Access for SNPN | Lenovo | approved | S3-223219 | - |
| S3-224036 | Draft TR 33.858 | Ericsson | approved | - | - |
| S3-224037 | New solution on Reusing N3GPP authentication for NPN | Huawei, HiSilicon | approved | S3-223490 | - |
| S3-224038 | Sol#3 Resolution of EN on visibility of application | Nokia, Nokia Shanghai Bell | approved | S3-223291 | - |
| S3-224039 | Sol#3 Resolution of EN on prearranged policies | Nokia, Nokia Shanghai Bell | approved | S3-223292 | - |
| S3-224040 | Sol#3 Resolution of EN on authorization of third party | Nokia, Nokia Shanghai Bell | approved | S3-223293 | - |
| S3-224041 | Sol#3 Resolution of EN on AKMA Usage | Nokia, Nokia Shanghai Bell | approved | S3-223294 | - |
| S3-224042 | Sol#3 Adding Evaluation | Nokia, Nokia Shanghai Bell | approved | S3-223297 | - |
| S3-224043 | Access to localized services using existing mechanisms | Intel | approved | S3-223558 | - |
| S3-224044 | New Solution to KI#2: Authentication for UE access to hosting network | Ericsson | approved | S3-223693 | - |
| S3-224045 | Proposal for a solution to KI#2 - PALS authentication through onboarding procedure and afterwards registration | Nokia, Nokia Shanghai Bell | approved | S3-223805 | - |
| S3-224046 | Proposal for a solution to KI#2 - PALS authentication through onboarding procedure and afterwards registration | Nokia, Nokia Shanghai Bell | approved | S3-223806 | - |
| S3-224047 | Revised SID on Security aspects for 5WWC Phase 2 | Nokia, Nokia Shanghai Bell, CableLabs, Lenovo, Apple | agreed | S3-223253 | - |
| S3-224048 | evaluation for solution 1 | Nokia, Nokia Shanghai Bell | approved | S3-223259 | - |
| S3-224049 | Addressing EN in Solution 2 | CableLabs | approved | S3-223851 | - |
| S3-224050 | Addressing EN in Solution 3 | CableLabs | approved | S3-223852 | - |
| S3-224051 | Addressing EN in Solution 4 | CableLabs | approved | S3-223853 | - |
| S3-224052 | Conclusions for KI#1 | CableLabs, Nokia, Nokia Shanghai Bell | approved | S3-223856 | - |
| S3-224053 | TNAP mobility solution with rand value | Nokia, Nokia Shanghai Bell, CableLabs, | approved | S3-223257 | - |
| S3-224054 | TNAP mobility solution with count | Nokia, Nokia Shanghai Bell, CableLabs, | approved | S3-223258 | - |
| S3-224055 | Proposed solution for TNAP mobility | Qualcomm Incorporated | approved | S3-223364 | - |
| S3-224056 | Draft TR 33.887 | Nokia, Nokia Shanghai Bell | approved | - | - |
| S3-224057 | Update of LI requirements on solution #5 | LG Electronics France | approved | S3-223580 | - |
| S3-224058 | Update of LI requirements on solution #12 | LG Electronics France | approved | S3-223581 | - |
| S3-224059 | PIN - Addressing EN#2 in Solution #4 | Philips International B.V. | approved | S3-223281 | - |
| S3-224060 | PIN - Addressing EN#4 in Solution #4 | Philips International B.V. | approved | S3-223283 | - |
| S3-224061 | Draft TR 33.882 | Vivo | approved | - | - |
| S3-224062 | Sol#3 Adding Evaluation | Nokia, Nokia Shanghai Bell | approved | S3-223308 | - |
| S3-224063 | Addressing the ENs in solution 1 | Huawei, HiSilicon | approved | S3-223521 | - |
| S3-224064 | New solution for AF manipulate PIN | vivo | approved | S3-223300 | - |
| S3-224065 | Address EN on PACF and MANO Communication | Johns Hopkins University APL, US National Security Agency, CISA ECD | noted | S3-223387 | - |
| S3-224066 | LS on embedding MnF in PACF security function | John Hopkins Univeristy | noted | - | - |
| S3-224067 | Solution for KI#1: Authentication and Authorization of PINE | Qualcomm Incorporated | approved | S3-223378 | - |
| S3-224068 | Reply LS on Support PIN application architecture and interaction | vivo | approved | S3-223299 | - |
| S3-224069 | PCR to 33.870 Changes to Solution #2 | InterDigital, Inc. | noted | S3-223200 | - |
| S3-224070 | KI4 Sol SCP authorization check by NRF | Nokia, Nokia Shanghai Bell | approved | S3-223741 | - |
| S3-224071 | KI#1 New sol AKMA roaming for external AF in the Data Network | Xiaomi Communication | approved | S3-223785 | - |
| S3-224072 | 33.700-28: Update to Key Issue #1 | Xiaomi Technology | approved | S3-223761 | - |
| S3-224073 | PIN - Addressing EN#1 in Solution #4 | Philips International B.V. | approved | S3-223280 | - |
| S3-224074 | PIN - Addressing EN#3 in Solution #4 | Philips International B.V. | approved | S3-223282 | - |
| S3-224075 | New solution on protection of data and analytics exchange in roaming case using Secure Multi-party Computation | China Mobile (Suzhou) Software | approved | S3-223663 | - |
| S3-224076 | Update to solution#8 | China Mobile (Suzhou) Software | approved | S3-223665 | - |
| S3-224077 | Add evaluation to Solution #8 | China Mobile (Suzhou) Software | approved | S3-223660 | - |
| S3-224078 | solution 1 evaluation | Nokia, Nokia Shanghai Bell | approved | S3-223269 | - |
| S3-224079 | Evaluation for Solution #5 | Nokia, Nokia Shanghai Bell | approved | S3-223391 | - |
| S3-224080 | Adding description about overview of vendor development and product lifecycle processes and test laboratory accreditation to clause 6.1 | China Mobile (Suzhou) Software | approved | S3-223458 | - |
| S3-224081 | Adding description about audit and accreditation of vendor development and product lifecycle processes to clause 6.2 | China Mobile (Suzhou) Software | approved | S3-223459 | - |
| S3-224082 | Adding description about Audit and accreditation of test laboratories to clause 6.3 | China Mobile (Suzhou) Software | approved | S3-223460 | - |
| S3-224083 | Adding description about content and process of SCAS instantiation evaluation to clause 7.2 | China Mobile (Suzhou) Software | approved | S3-223556 | - |
| S3-224084 | Adding description about partial compliance and use of SECAM requirements in network product development cycle to clause 7.4 | China Mobile (Suzhou) Software | approved | S3-223632 | - |
| S3-224085 | Adding clause 4.4 in TR 33.927 | China Mobile (Suzhou) Software | approved | S3-223634 | - |
| S3-224086 | Adding clause 6 in TR 33.927 | China Mobile (Suzhou) Software | approved | S3-223640 | - |
| S3-224087 | WID on SBA security | Nokia, Nokia Shanghai Bell | agreed | S3-223829 | - |
| S3-224088 | Sol#3 Resolution of EN on authorization of PEGC | Nokia, Nokia Shanghai Bell | approved | S3-223306 | - |
| S3-224089 | Clarification for IPSec in UPF interfaces | Keysight Technologies UK Ltd | approved | - | - |
| S3-224090 | Key Issue Update on User Consent for NTN | Huawei, HiSilicon, Philips International B.V., Xiaomi, Qualcomm, Apple | noted | S3-223483 | - |
| S3-224091 | Overview of UC3S\_Ph2 | Huawei, HiSilicon | approved | S3-223485 | - |
| S3-224092 | Guidance for Enforcing User Consent | Huawei, HiSilicon | approved | S3-223562 | - |
| S3-224093 | Add conclusion to KI#2 about DAA unicast security | Huawei, HiSilicon | noted | S3-223467 | - |
| S3-224094 | Add conclusion to KI#5 about DAA unicast privacy | Huawei, HiSilicon | approved | S3-223474 | - |
| S3-224095 | Conclusion on UE-to-UE relay security | Huawei, HiSilicon | approved | S3-223470 | - |
| S3-224096 | Draft TR 33.936 | China Mobile | approved | - | - |
| S3-224097 | Draft TR 33.927 | China Mobile | approved | - | - |
| S3-224098 | Draft TR 33.537 | China Mobile | approved | - | - |
| S3-224099 | Resolving ENs in solution 6.16 | CableLabs | approved | S3-223861 | - |
| S3-224100 | Conclusion on KI#5 in TR 33.875 | Mavenir | approved | S3-223244 | - |
| S3-224101 | Address EN for solution 1 | Huawei, HiSilicon | approved | S3-223488 | - |
| S3-224102 | Conclusion for KI#6 in TR 33.875 | Mavenir | approved | S3-223246 | - |
| S3-224103 | Draft TR 33.742 | Qualcomm | approved | - | - |
| S3-224104 | Conclution on KI#7 | Huawei, HiSilicon | approved | S3-223594 | - |
| S3-224105 | SA3 meeting calendar | SA WG3 Chair | noted | S3-223146 | - |
| S3-224106 | Draft TR 33.884 | NTT-Docomo | approved | - | - |
| S3-224107 | KI9 update to sol17 on authorization mechanism negotiation | Nokia, Nokia Shanghai Bell | withdrawn | - | - |
| S3-224108 | KI10 solution on N32 security profiles | Nokia, Nokia Shanghai Bell | approved | S3-223798 | - |
| S3-224109 | Draft TR 33.737 | China Mobile | approved | - | - |
| S3-224110 | Resolving Editor’s Note in Solution #20 in TR 33.875 | Mavenir | approved | S3-223328 | - |
| S3-224111 | pCR to 33.875 - Update of Key Issue 10 | Vodafone España SA,Nokia, Nokia Shanghai Bell | approved | S3-223850 | - |
| S3-224112 | Draft TR 33.891 | Qualcomm | approved | - | - |
| S3-224113 | New key issue on enhancement of user consent for using MDT for NG-RAN AI/ML | Nokia, Nokia Shanghai Bell | withdrawn | - | - |
| S3-224114 | EN removal for privacy prevention of NAI solution | Nokia, Nokia Shanghai Bell | approved | S3-223238 | - |
| S3-224115 | Resolution of ENs in solution #14 | THALES | approved | S3-223579 | - |
| S3-224116 | Evaluation Solution #4 | InterDigital, Europe, Ltd. | approved | S3-223323 | - |
| S3-224117 | Conclusion TR 33.891 KI #1 | InterDigital, Europe, Ltd. | noted | S3-223325 | - |
| S3-224118 | Conclusion TR 33.891 KI #3 | InterDigital, Europe, Ltd. | approved | S3-223326 | - |
| S3-224119 | Conclusion TR 33.891 KI #4 | InterDigital, Europe, Ltd. | approved | S3-223327 | - |
| S3-224120 | Draft TR 33.883 | Huawei | approved | - | - |
| S3-224121 | Editorial changes to the living document for MnF SCAS | Huawei, HiSilicon | approved | S3-223533 | - |
| S3-224122 | Living document for MnF SCAS | Huawei, HiSilicon | approved | S3-223567 | - |
| S3-224123 | Updates to clause 4.3 of MnF SCAS | Huawei, HiSilicon | approved | S3-223571 | - |
| S3-224124 | New solution: How to avoid e2ae limitation and achieve e2e security for IMS Data Channel | Ericsson | approved | S3-223843 | - |
| S3-224125 | Evaluation of tenet 4 on resource access | Huawei, HiSilicon | withdrawn | - | - |
| S3-224126 | Update to Tenet #7 | Lenovo, US National Security Agency, Charter Communications | approved | S3-223868 | - |
| S3-224127 | Update to Tenet #5 | Lenovo, US National Security Agency, Charter Communications | noted | S3-223865 | - |
| S3-224128 | 33.893: Additional Roles for Authorization in KI#2 | Xiaomi Technology | approved | S3-223746 | - |
| S3-224129 | Draft TR 33.893 | Xiaomi | approved | - | - |
| S3-224130 | 33.893: New Solution on Security Policy based Protection for Ranging Communication | Xiaomi Technology | approved | S3-223752 | - |
| S3-224131 | 33.893: New Solution on Security Policy based Protection for Ranging Result sent to SL Positioning Client UE | Xiaomi Technology | approved | S3-223753 | - |
| S3-224132 | New WID on IETF OSCORE protocol profiles for GBA and AKMA | Ericsson | agreed | S3-223834 | - |
| S3-224133 | Correcting the handling of synchronisation error | Ericsson | agreed | S3-223704 | - |
| S3-224134 | Updates to solution 3 based on pseudonyms | Huawei, HiSilicon | approved | S3-223540 | - |
| S3-224135 | Living document for AAnF SCAS – draftCR to TR 33.926 | China Mobile | approved | - | - |
| S3-224136 | conclusion on AKMA roaming | Huawei, HiSilicon | approved | S3-223505 | - |
| S3-224137 | Conclusion for KI#1 case 2 | China Mobile (Suzhou) Software | approved | S3-223675 | - |
| S3-224138 | PCR to 33.876 - Addition of Key Issue: security of internal NF service communicaitons | Vodafone España SA | approved | S3-223828 | - |
| S3-224139 | Solution for ensuring the management of bulk certificate updates | Nokia, Nokia Shanghai Bell | approved | S3-223384 | - |
| S3-224140 | Policy based certificate update/renewal | Huawei, HiSilicon | approved | S3-223544 | - |
| S3-224141 | New solution for AKMA roaming with VPLMN AKMA Support NF for inbound roamers | Ericsson | approved | S3-223832 | - |
| S3-224142 | Resolve 4 ENs in Solution#1 | Ericsson | approved | S3-223841 | - |
| S3-224143 | Add Evaluation for Solution#1 | Ericsson | approved | S3-223842 | - |
| S3-224144 | Resolving ENs and evaluation for Solution #7 | Nokia, Nokia Shanghai Bell | approved | S3-223389 | - |
| S3-224145 | Evaluation for Solution #3 | Nokia, Nokia Shanghai Bell | approved | S3-223392 | - |
| S3-224146 | Update of solution #4 | Lenovo | approved | S3-223217 | - |
| S3-224147 | Updates to solution 2: remove EN E2E protection | Intel | approved | S3-223563 | - |
| S3-224148 | Authorization of AI/ML model sharing between different vendors and usage of one-time URLs | Ericsson | approved | S3-223657 | - |
| S3-224149 | Solution on Token based Authorization of AI/ML Model sharing between different vendors(ADRF) | Ericsson | approved | S3-223689 | - |
| S3-224150 | Solution on Authorization of AI/ML Model sharing between different vendors(MTLF) | Ericsson | approved | S3-223690 | - |
| S3-224151 | New solution for KI#3 to support authorization of AI/ML model sharing By NWDAF containing MTLF(local auth) | Ericsson | approved | S3-223691 | - |
| S3-224152 | Update KI#3 | Huawei, HiSilicon | noted | S3-223499 | - |
| S3-224153 | Solution to KI#3 | Huawei, HiSilicon | noted | S3-223500 | - |
| S3-224154 | Conclusion to KI#3 | Huawei, HiSilicon | noted | S3-223501 | - |
| S3-224155 | living doc to TR33.926 | Huawei, HiSilicon | approved | S3-223506 | - |
| S3-224156 | living doc to TR33.216 | Huawei, HiSilicon | approved | S3-223507 | - |
| S3-224157 | EN addressing for solution#2 | Huawei, HiSilicon | approved | S3-223597 | - |
| S3-224158 | New solution to KI#2 | Huawei, HiSilicon | approved | S3-223599 | - |
| S3-224159 | Update to KI#2 | Huawei, HiSilicon | approved | S3-223479 | - |
| S3-224160 | Draft TR 33.877 | Ericsson | approved | - | - |
| S3-224161 | Correction to authentication mechanism selection | Ericsson, Xiaomi | agreed | S3-223702 | - |
| S3-224162 | Draft TR 33.894 | Lenovo | approved | - | - |
| S3-224163 | Draft TS 33.526 | Huawei | approved | - | - |
| S3-224164 | Draft TR 33.870 | Interdigital | approved | - | - |
| S3-224165 | Draft TR 33.876 | Nokia | approved | - | - |
| S3-224166 | Draft TR 33.700-28 | Xiaomi | approved | - | - |
| S3-224167 | LS reply on CAPIF authorization roles related to FS\_SNAAPP | S6-223489 | postponed | - | - |
| S3-224168 | LS reply on SNAAPP requirements clarifications | S6-223488 | postponed | - | - |
| S3-224169 | Draft CR: Introducing split gNBs into TR 33.926 | Qualcomm Incoporated | approved | S3-223342 | - |
| S3-224170 | Alignment of Link Identifier Update (LIU) procedure | InterDigital, Europe, Ltd. | agreed | S3-223315 | - |
| S3-224171 | Allocate FC Value for 33.503 | ZTE Corporation | agreed | S3-223557 | - |
| S3-224172 | [MCPTT] 33179 R13 Incorrect example | Airbus | agreed | S3-223944 | - |
| S3-224173 | New WID on HONTRA | Huawei, HiSilicon | agreed | S3-223504 | - |
| S3-224174 | Remove EN and Provide Evaluation for Solution #4 | China Mobile (Suzhou) Software | noted | S3-223446 | - |
| S3-224175 | Reply LS on Progress and open issues for NPN enhancements in Rel-18 | Qualcomm Incorporated | approved | S3-223375 | - |
| S3-224176 | Evaluation of solution #8 | Qualcomm Incorporated | approved | S3-223377 | - |
| S3-224177 | Solution on prevention of URSP rule misuse by a non-genuine application using home network anchor | Intel | approved | S3-223576 | - |
| S3-224178 | Draft TR 33.738 | China Mobile | approved | - | - |
| S3-224179 | Draft TR 33.890 | Huawei | approved | - | - |
| S3-224180 | Draft TR 33.892 | Lenovo | approved | - | - |
| S3-224181 | Draft TR 33.896 | Huawei | approved | - | - |
| S3-224182 | A new solution on MOCN network sharing scenario | Huawei, HiSilicon | approved | S3-223525 | - |
| S3-224183 | Trust in service mesh and standalone SCP implementations | Nokia, Nokia Shanghai Bell | approved | S3-223710 | - |

### A2: Tdoc decision timing

|  |  |  |
| --- | --- | --- |
| Document | Date/time UTC | Decision |
| S3-223140 | 14/11/2022 07:27:36 | approved |
| S3-223141 | 14/11/2022 07:31:04 | approved |
| S3-223142 | 14/11/2022 07:31:09 | approved |
| S3-223143 | 14/11/2022 07:30:59 | noted |
| S3-223144 | 14/11/2022 07:31:49 | noted |
| S3-223145 | 14/11/2022 07:31:02 | noted |
| S3-223146 | 18/11/2022 14:07:48 | revised |
| S3-223147 | 14/11/2022 10:24:45 | postponed |
| S3-223148 | 17/11/2022 15:13:56 | available |
| S3-223149 | 14/11/2022 07:49:06 | available |
| S3-223150 | 18/11/2022 08:03:56 | available |
| S3-223151 | 14/11/2022 08:18:08 | available |
| S3-223151 | 18/11/2022 07:52:43 | postponed |
| S3-223152 | 14/11/2022 08:26:00 | available |
| S3-223152 | 17/11/2022 15:30:03 | postponed |
| S3-223153 | 14/11/2022 08:24:03 | available |
| S3-223153 | 14/11/2022 08:25:35 | replied to |
| S3-223153 | 14/11/2022 08:25:50 | noted |
| S3-223154 | 14/11/2022 09:10:40 | noted |
| S3-223155 | 14/11/2022 09:12:24 | noted |
| S3-223156 | 14/11/2022 09:17:33 | noted |
| S3-223157 | 14/11/2022 08:31:22 | replied to |
| S3-223158 | 17/11/2022 07:47:48 | postponed |
| S3-223159 | 14/11/2022 09:17:59 | noted |
| S3-223160 | 14/11/2022 09:20:43 | noted |
| S3-223161 | 18/11/2022 07:53:27 | postponed |
| S3-223162 | 14/11/2022 07:58:00 | available |
| S3-223162 | 18/11/2022 07:50:06 | postponed |
| S3-223163 | 14/11/2022 08:03:30 | replied to |
| S3-223163 | 18/11/2022 08:09:37 | postponed |
| S3-223164 | 14/11/2022 12:23:05 | available |
| S3-223165 | 14/11/2022 08:23:50 | available |
| S3-223165 | 17/11/2022 15:30:01 | postponed |
| S3-223166 | 14/11/2022 09:38:18 | replied to |
| S3-223167 | 14/11/2022 09:53:58 | noted |
| S3-223168 | 18/11/2022 12:34:51 | available |
| S3-223169 | 14/11/2022 10:03:00 | noted |
| S3-223170 | 14/11/2022 10:03:34 | noted |
| S3-223171 | 14/11/2022 10:05:27 | noted |
| S3-223172 | 14/11/2022 12:20:10 | available |
| S3-223172 | 18/11/2022 13:56:25 | postponed |
| S3-223173 | 14/11/2022 09:50:21 | available |
| S3-223173 | 18/11/2022 07:56:59 | postponed |
| S3-223174 | 14/11/2022 10:11:10 | noted |
| S3-223175 | 18/11/2022 08:13:48 | available |
| S3-223176 | 14/11/2022 10:17:50 | available |
| S3-223176 | 18/11/2022 07:59:09 | postponed |
| S3-223177 | 14/11/2022 10:18:42 | noted |
| S3-223178 | 14/11/2022 08:08:04 | available |
| S3-223178 | 14/11/2022 08:08:17 | merged |
| S3-223179 | 14/11/2022 08:09:42 | noted |
| S3-223180 | 14/11/2022 10:09:33 | available |
| S3-223181 | 14/11/2022 07:48:49 | noted |
| S3-223182 | 14/11/2022 10:25:32 | noted |
| S3-223183 | 14/11/2022 09:13:21 | noted |
| S3-223184 | 14/11/2022 10:00:51 | available |
| S3-223185 | 14/11/2022 09:14:23 | noted |
| S3-223186 | 17/11/2022 07:51:45 | withdrawn |
| S3-223187 | 18/11/2022 07:01:28 | available |
| S3-223188 | 18/11/2022 07:01:32 | available |
| S3-223189 | 15/11/2022 07:11:04 | revised |
| S3-223190 | 15/11/2022 07:15:13 | revised |
| S3-223191 | 15/11/2022 07:20:20 | revised |
| S3-223192 | 18/11/2022 07:03:50 | available |
| S3-223193 | 18/11/2022 07:04:13 | available |
| S3-223194 | 18/11/2022 07:04:16 | available |
| S3-223195 | 14/11/2022 09:18:59 | noted |
| S3-223196 | 17/11/2022 16:16:03 | available |
| S3-223197 | 18/11/2022 07:04:20 | available |
| S3-223198 | 18/11/2022 07:04:25 | available |
| S3-223199 | 14/11/2022 07:34:13 | noted |
| S3-223200 | 16/11/2022 16:46:01 | revised |
| S3-223201 | 18/11/2022 09:55:57 | available |
| S3-223202 | 18/11/2022 13:59:35 | agreed |
| S3-223203 | 15/11/2022 09:49:01 | revised |
| S3-223204 | 14/11/2022 08:23:21 | revised |
| S3-223204 | 17/11/2022 15:29:51 | noted |
| S3-223205 | 18/11/2022 13:52:41 | noted |
| S3-223206 | 17/11/2022 07:09:15 | revised |
| S3-223206 | 17/11/2022 07:52:04 | available |
| S3-223207 | 18/11/2022 06:18:07 | agreed |
| S3-223208 | 17/11/2022 07:52:18 | available |
| S3-223209 | 18/11/2022 12:18:27 | noted |
| S3-223210 | 18/11/2022 12:18:53 | available |
| S3-223213 | 14/11/2022 10:17:42 | revised |
| S3-223215 | 17/11/2022 08:28:22 | approved |
| S3-223216 | 18/11/2022 11:36:33 | available |
| S3-223217 | 17/11/2022 14:52:09 | revised |
| S3-223218 | 16/11/2022 12:20:46 | revised |
| S3-223219 | 16/11/2022 12:22:01 | revised |
| S3-223220 | 18/11/2022 08:23:28 | noted |
| S3-223221 | 17/11/2022 09:13:17 | noted |
| S3-223222 | 18/11/2022 12:45:54 | noted |
| S3-223223 | 18/11/2022 09:56:00 | available |
| S3-223224 | 15/11/2022 16:59:56 | noted |
| S3-223225 | 18/11/2022 12:54:42 | available |
| S3-223226 | 18/11/2022 12:54:38 | available |
| S3-223227 | 18/11/2022 11:57:27 | available |
| S3-223228 | 18/11/2022 11:55:08 | available |
| S3-223229 | 14/11/2022 07:57:42 | revised |
| S3-223230 | 18/11/2022 12:53:26 | available |
| S3-223231 | 17/11/2022 08:35:45 | revised |
| S3-223231 | 21/11/2022 13:27:33 | noted |
| S3-223232 | 18/11/2022 13:36:19 | noted |
| S3-223233 | 16/11/2022 07:28:17 | noted |
| S3-223234 | 18/11/2022 13:19:15 | noted |
| S3-223235 | 17/11/2022 09:38:31 | noted |
| S3-223236 | 18/11/2022 13:19:30 | noted |
| S3-223237 | 18/11/2022 09:56:04 | available |
| S3-223238 | 17/11/2022 08:35:54 | revised |
| S3-223239 | 16/11/2022 06:22:57 | noted |
| S3-223240 | 16/11/2022 06:24:57 | revised |
| S3-223241 | 16/11/2022 06:50:31 | revised |
| S3-223242 | 16/11/2022 06:50:34 | revised |
| S3-223243 | 17/11/2022 07:55:39 | noted |
| S3-223244 | 17/11/2022 07:56:33 | revised |
| S3-223245 | 17/11/2022 08:00:04 | noted |
| S3-223246 | 17/11/2022 08:00:48 | revised |
| S3-223247 | 15/11/2022 14:52:14 | revised |
| S3-223248 | 16/11/2022 10:31:52 | revised |
| S3-223249 | 15/11/2022 16:21:49 | approved |
| S3-223250 | 18/11/2022 12:54:12 | noted |
| S3-223251 | 17/11/2022 06:56:59 | noted |
| S3-223252 | 16/11/2022 13:12:34 | noted |
| S3-223253 | 16/11/2022 13:17:39 | revised |
| S3-223254 | 18/11/2022 12:28:24 | available |
| S3-223255 | 18/11/2022 12:28:19 | available |
| S3-223255 | 18/11/2022 12:28:49 | noted |
| S3-223256 | 18/11/2022 12:28:22 | available |
| S3-223257 | 16/11/2022 13:36:13 | revised |
| S3-223258 | 16/11/2022 13:37:12 | revised |
| S3-223259 | 16/11/2022 13:20:05 | revised |
| S3-223260 | 15/11/2022 09:51:27 | noted |
| S3-223261 | 18/11/2022 06:26:57 | available |
| S3-223262 | 18/11/2022 07:18:41 | available |
| S3-223263 | 18/11/2022 07:18:45 | available |
| S3-223264 | 14/11/2022 15:52:29 | revised |
| S3-223265 | 14/11/2022 12:35:13 | revised |
| S3-223266 | 14/11/2022 12:35:05 | available |
| S3-223267 | 17/11/2022 08:28:23 | approved |
| S3-223268 | 17/11/2022 08:31:15 | approved |
| S3-223269 | 17/11/2022 06:04:44 | revised |
| S3-223270 | 18/11/2022 11:43:37 | available |
| S3-223271 | 18/11/2022 11:47:05 | available |
| S3-223272 | 18/11/2022 11:47:07 | available |
| S3-223273 | 16/11/2022 09:39:31 | revised |
| S3-223274 | 16/11/2022 09:36:02 | available |
| S3-223275 | 15/11/2022 17:11:41 | noted |
| S3-223276 | 16/11/2022 08:25:16 | revised |
| S3-223277 | 15/11/2022 15:20:22 | noted |
| S3-223278 | 16/11/2022 17:06:16 | approved |
| S3-223279 | 16/11/2022 07:56:08 | approved |
| S3-223280 | 16/11/2022 17:06:43 | revised |
| S3-223281 | 16/11/2022 14:56:24 | revised |
| S3-223282 | 16/11/2022 17:08:04 | revised |
| S3-223283 | 16/11/2022 15:02:32 | revised |
| S3-223284 | 18/11/2022 09:16:55 | available |
| S3-223284 | 18/11/2022 09:18:34 | noted |
| S3-223285 | 18/11/2022 09:18:03 | available |
| S3-223285 | 18/11/2022 09:18:21 | noted |
| S3-223286 | 18/11/2022 09:18:06 | available |
| S3-223286 | 18/11/2022 09:18:20 | noted |
| S3-223287 | 16/11/2022 08:37:30 | revised |
| S3-223288 | 18/11/2022 12:51:46 | available |
| S3-223289 | 15/11/2022 17:29:17 | noted |
| S3-223290 | 17/11/2022 08:14:46 | approved |
| S3-223291 | 16/11/2022 12:32:11 | revised |
| S3-223292 | 16/11/2022 12:32:14 | revised |
| S3-223293 | 16/11/2022 12:32:27 | revised |
| S3-223294 | 16/11/2022 12:32:30 | revised |
| S3-223295 | 18/11/2022 12:15:49 | available |
| S3-223296 | 18/11/2022 12:15:51 | available |
| S3-223297 | 16/11/2022 12:33:16 | revised |
| S3-223298 | 14/11/2022 09:49:44 | revised |
| S3-223299 | 16/11/2022 15:57:14 | revised |
| S3-223300 | 16/11/2022 15:26:56 | revised |
| S3-223301 | 16/11/2022 15:30:40 | noted |
| S3-223302 | 16/11/2022 15:35:02 | noted |
| S3-223303 | 16/11/2022 15:37:19 | noted |
| S3-223304 | 16/11/2022 15:07:11 | noted |
| S3-223305 | 16/11/2022 15:51:22 | noted |
| S3-223306 | 17/11/2022 06:57:39 | revised |
| S3-223307 | 16/11/2022 15:17:23 | approved |
| S3-223308 | 16/11/2022 15:20:05 | revised |
| S3-223309 | 18/11/2022 12:12:51 | noted |
| S3-223310 | 15/11/2022 15:25:36 | revised |
| S3-223311 | 18/11/2022 09:33:45 | approved |
| S3-223312 | 16/11/2022 07:58:59 | revised |
| S3-223313 | 16/11/2022 08:01:53 | revised |
| S3-223314 | 16/11/2022 08:28:18 | revised |
| S3-223315 | 18/11/2022 06:40:21 | revised |
| S3-223316 | 15/11/2022 13:21:39 | agreed |
| S3-223317 | 14/11/2022 07:38:36 | revised |
| S3-223318 | 18/11/2022 06:41:23 | available |
| S3-223319 | 18/11/2022 06:41:26 | available |
| S3-223320 | 18/11/2022 06:41:30 | available |
| S3-223321 | 18/11/2022 06:41:33 | available |
| S3-223322 | 18/11/2022 09:47:54 | available |
| S3-223323 | 17/11/2022 09:04:11 | revised |
| S3-223324 | 17/11/2022 08:35:10 | approved |
| S3-223325 | 17/11/2022 09:04:31 | revised |
| S3-223326 | 17/11/2022 09:04:43 | revised |
| S3-223327 | 17/11/2022 09:04:47 | revised |
| S3-223328 | 17/11/2022 08:29:58 | revised |
| S3-223329 | 18/11/2022 13:31:22 | available |
| S3-223330 | 16/11/2022 06:50:44 | revised |
| S3-223331 | 18/11/2022 07:18:00 | available |
| S3-223332 | 14/11/2022 13:55:41 | revised |
| S3-223333 | 14/11/2022 13:59:01 | revised |
| S3-223334 | 18/11/2022 07:07:15 | agreed |
| S3-223335 | 18/11/2022 07:07:19 | agreed |
| S3-223336 | 14/11/2022 14:50:05 | agreed |
| S3-223337 | 14/11/2022 14:50:05 | agreed |
| S3-223338 | 14/11/2022 14:50:17 | agreed |
| S3-223339 | 14/11/2022 14:50:18 | agreed |
| S3-223340 | 14/11/2022 14:53:06 | available |
| S3-223340 | 14/11/2022 14:53:15 | revised |
| S3-223341 | 14/11/2022 14:53:09 | available |
| S3-223342 | 17/11/2022 09:08:14 | approved |
| S3-223342 | 18/11/2022 06:21:18 | revised |
| S3-223343 | 17/11/2022 08:07:23 | approved |
| S3-223344 | 17/11/2022 08:07:32 | approved |
| S3-223345 | 17/11/2022 08:07:38 | approved |
| S3-223346 | 17/11/2022 08:07:39 | approved |
| S3-223347 | 18/11/2022 06:23:31 | noted |
| S3-223348 | 17/11/2022 08:07:51 | approved |
| S3-223349 | 17/11/2022 08:07:51 | approved |
| S3-223350 | 17/11/2022 08:08:04 | approved |
| S3-223351 | 18/11/2022 06:24:32 | noted |
| S3-223352 | 17/11/2022 08:08:05 | approved |
| S3-223353 | 17/11/2022 08:09:36 | approved |
| S3-223354 | 17/11/2022 08:09:36 | approved |
| S3-223355 | 17/11/2022 08:32:00 | approved |
| S3-223356 | 17/11/2022 08:32:01 | approved |
| S3-223357 | 18/11/2022 12:41:10 | noted |
| S3-223358 | 17/11/2022 09:09:55 | approved |
| S3-223359 | 18/11/2022 11:48:27 | noted |
| S3-223360 | 16/11/2022 09:42:22 | revised |
| S3-223361 | 18/11/2022 11:50:18 | available |
| S3-223362 | 14/11/2022 17:17:14 | revised |
| S3-223363 | 18/11/2022 11:55:17 | available |
| S3-223364 | 16/11/2022 13:45:13 | revised |
| S3-223365 | 14/11/2022 12:25:30 | available |
| S3-223366 | 14/11/2022 12:22:59 | available |
| S3-223367 | 18/11/2022 06:42:12 | noted |
| S3-223368 | 15/11/2022 12:17:59 | revised |
| S3-223369 | 16/11/2022 07:49:03 | revised |
| S3-223370 | 15/11/2022 15:08:14 | available |
| S3-223370 | 16/11/2022 07:13:22 | merged |
| S3-223370 | 16/11/2022 07:52:26 | revised |
| S3-223371 | 16/11/2022 07:54:59 | revised |
| S3-223372 | 18/11/2022 09:17:00 | available |
| S3-223372 | 18/11/2022 09:18:32 | noted |
| S3-223373 | 18/11/2022 09:18:08 | available |
| S3-223373 | 18/11/2022 09:18:19 | noted |
| S3-223374 | 18/11/2022 08:13:08 | noted |
| S3-223375 | 18/11/2022 08:13:33 | revised |
| S3-223376 | 18/11/2022 09:57:25 | available |
| S3-223377 | 18/11/2022 09:59:28 | revised |
| S3-223378 | 16/11/2022 15:50:45 | revised |
| S3-223379 | 14/11/2022 09:38:42 | revised |
| S3-223380 | 16/11/2022 06:43:50 | revised |
| S3-223381 | 16/11/2022 06:49:35 | revised |
| S3-223382 | 18/11/2022 11:15:45 | noted |
| S3-223383 | 16/11/2022 07:01:12 | revised |
| S3-223384 | 17/11/2022 13:32:05 | revised |
| S3-223385 | 18/11/2022 05:55:07 | approved |
| S3-223386 | 14/11/2022 08:31:42 | revised |
| S3-223387 | 16/11/2022 15:27:15 | revised |
| S3-223388 | 18/11/2022 11:36:18 | available |
| S3-223389 | 17/11/2022 14:43:06 | revised |
| S3-223390 | 18/11/2022 11:36:28 | available |
| S3-223391 | 17/11/2022 06:05:54 | revised |
| S3-223392 | 17/11/2022 14:47:21 | revised |
| S3-223393 | 18/11/2022 09:20:20 | noted |
| S3-223394 | 15/11/2022 09:41:48 | revised |
| S3-223395 | 17/11/2022 08:22:42 | available |
| S3-223396 | 18/11/2022 12:57:56 | noted |
| S3-223397 | 18/11/2022 12:58:03 | noted |
| S3-223399 | 15/11/2022 10:00:48 | agreed |
| S3-223400 | 15/11/2022 15:28:43 | revised |
| S3-223401 | 15/11/2022 15:30:27 | approved |
| S3-223402 | 18/11/2022 12:53:16 | available |
| S3-223403 | 18/11/2022 12:53:18 | available |
| S3-223404 | 15/11/2022 10:00:48 | agreed |
| S3-223405 | 17/11/2022 09:15:09 | available |
| S3-223406 | 18/11/2022 09:59:58 | available |
| S3-223407 | 18/11/2022 11:18:52 | available |
| S3-223408 | 17/11/2022 10:18:10 | noted |
| S3-223409 | 15/11/2022 12:15:01 | available |
| S3-223410 | 18/11/2022 12:18:25 | noted |
| S3-223411 | 18/11/2022 12:18:55 | available |
| S3-223412 | 17/11/2022 08:19:02 | noted |
| S3-223413 | 18/11/2022 12:18:47 | available |
| S3-223414 | 18/11/2022 07:24:20 | available |
| S3-223415 | 14/11/2022 13:36:03 | available |
| S3-223416 | 15/11/2022 09:34:09 | available |
| S3-223417 | 15/11/2022 09:34:12 | available |
| S3-223418 | 14/11/2022 14:00:10 | available |
| S3-223419 | 14/11/2022 14:01:31 | available |
| S3-223420 | 18/11/2022 09:18:11 | available |
| S3-223420 | 18/11/2022 09:18:19 | noted |
| S3-223421 | 16/11/2022 07:28:56 | noted |
| S3-223422 | 18/11/2022 06:19:42 | noted |
| S3-223423 | 18/11/2022 06:19:43 | noted |
| S3-223424 | 14/11/2022 12:40:13 | available |
| S3-223425 | 14/11/2022 12:40:46 | available |
| S3-223426 | 14/11/2022 12:44:26 | available |
| S3-223427 | 15/11/2022 12:44:49 | available |
| S3-223428 | 15/11/2022 12:51:47 | revised |
| S3-223429 | 15/11/2022 12:45:04 | revised |
| S3-223430 | 15/11/2022 12:53:56 | agreed |
| S3-223432 | 16/11/2022 12:01:37 | revised |
| S3-223433 | 17/11/2022 08:31:32 | approved |
| S3-223434 | 18/11/2022 11:44:59 | available |
| S3-223435 | 18/11/2022 11:47:29 | available |
| S3-223436 | 17/11/2022 08:31:33 | approved |
| S3-223437 | 16/11/2022 09:44:09 | approved |
| S3-223438 | 16/11/2022 09:47:21 | revised |
| S3-223439 | 16/11/2022 09:49:17 | approved |
| S3-223440 | 18/11/2022 12:06:13 | available |
| S3-223441 | 18/11/2022 12:06:17 | available |
| S3-223442 | 18/11/2022 12:18:29 | available |
| S3-223443 | 18/11/2022 12:18:59 | available |
| S3-223444 | 18/11/2022 12:54:19 | noted |
| S3-223445 | 15/11/2022 12:22:37 | revised |
| S3-223446 | 18/11/2022 07:31:25 | revised |
| S3-223447 | 16/11/2022 07:31:36 | noted |
| S3-223448 | 18/11/2022 12:06:20 | available |
| S3-223449 | 18/11/2022 12:06:22 | available |
| S3-223450 | 18/11/2022 12:06:25 | available |
| S3-223451 | 15/11/2022 15:33:27 | revised |
| S3-223452 | 15/11/2022 15:41:56 | approved |
| S3-223453 | 16/11/2022 08:30:19 | revised |
| S3-223454 | 14/11/2022 08:08:08 | available |
| S3-223455 | 17/11/2022 12:58:21 | noted |
| S3-223457 | 17/11/2022 07:53:10 | approved |
| S3-223458 | 17/11/2022 06:34:21 | revised |
| S3-223459 | 17/11/2022 06:34:24 | revised |
| S3-223460 | 17/11/2022 06:34:27 | revised |
| S3-223461 | 17/11/2022 06:37:26 | approved |
| S3-223462 | 15/11/2022 12:16:40 | available |
| S3-223463 | 15/11/2022 12:21:01 | available |
| S3-223464 | 18/11/2022 12:53:23 | available |
| S3-223465 | 18/11/2022 12:53:06 | available |
| S3-223466 | 17/11/2022 09:10:44 | available |
| S3-223467 | 17/11/2022 07:34:01 | revised |
| S3-223468 | 17/11/2022 09:11:44 | approved |
| S3-223469 | 15/11/2022 14:55:31 | revised |
| S3-223470 | 17/11/2022 07:34:53 | revised |
| S3-223471 | 16/11/2022 07:23:22 | revised |
| S3-223472 | 18/11/2022 07:56:22 | available |
| S3-223473 | 17/11/2022 09:11:22 | available |
| S3-223474 | 17/11/2022 07:34:24 | revised |
| S3-223475 | 15/11/2022 15:40:41 | available |
| S3-223476 | 16/11/2022 08:32:06 | revised |
| S3-223477 | 15/11/2022 15:23:36 | revised |
| S3-223478 | 18/11/2022 09:40:43 | available |
| S3-223479 | 17/11/2022 17:04:20 | revised |
| S3-223480 | 15/11/2022 17:15:07 | revised |
| S3-223480 | 18/11/2022 12:55:07 | noted |
| S3-223481 | 18/11/2022 12:55:35 | revised |
| S3-223482 | 14/11/2022 07:46:54 | revised |
| S3-223483 | 17/11/2022 07:20:28 | revised |
| S3-223484 | 18/11/2022 13:06:32 | noted |
| S3-223485 | 17/11/2022 07:20:56 | revised |
| S3-223486 | 17/11/2022 08:23:02 | noted |
| S3-223487 | 17/11/2022 06:09:50 | noted |
| S3-223488 | 17/11/2022 07:58:56 | revised |
| S3-223489 | 17/11/2022 08:18:49 | noted |
| S3-223490 | 16/11/2022 12:27:15 | revised |
| S3-223491 | 18/11/2022 12:35:24 | noted |
| S3-223492 | 14/11/2022 07:57:53 | available |
| S3-223493 | 17/11/2022 17:26:19 | approved |
| S3-223494 | 17/11/2022 17:28:31 | approved |
| S3-223495 | 17/11/2022 17:28:31 | approved |
| S3-223496 | 18/11/2022 09:20:32 | noted |
| S3-223497 | 18/11/2022 12:21:04 | available |
| S3-223498 | 18/11/2022 12:21:10 | available |
| S3-223499 | 17/11/2022 15:09:59 | revised |
| S3-223500 | 17/11/2022 15:10:08 | revised |
| S3-223501 | 17/11/2022 15:10:12 | revised |
| S3-223502 | 16/11/2022 09:53:29 | revised |
| S3-223503 | 16/11/2022 09:54:47 | revised |
| S3-223503 | 16/11/2022 09:55:14 | approved |
| S3-223504 | 18/11/2022 07:31:10 | revised |
| S3-223505 | 17/11/2022 12:48:58 | revised |
| S3-223506 | 17/11/2022 15:10:24 | revised |
| S3-223507 | 17/11/2022 15:10:28 | revised |
| S3-223508 | 17/11/2022 17:30:02 | approved |
| S3-223509 | 17/11/2022 17:29:15 | noted |
| S3-223510 | 17/11/2022 17:29:17 | noted |
| S3-223511 | 16/11/2022 09:12:21 | revised |
| S3-223512 | 16/11/2022 13:47:39 | approved |
| S3-223513 | 16/11/2022 13:52:25 | noted |
| S3-223514 | 16/11/2022 07:04:27 | revised |
| S3-223515 | 16/11/2022 07:08:15 | revised |
| S3-223516 | 18/11/2022 11:19:00 | available |
| S3-223517 | 14/11/2022 15:22:50 | noted |
| S3-223518 | 18/11/2022 07:12:03 | available |
| S3-223519 | 15/11/2022 09:47:04 | revised |
| S3-223520 | 18/11/2022 08:06:10 | noted |
| S3-223521 | 16/11/2022 15:23:47 | revised |
| S3-223522 | 14/11/2022 14:02:41 | agreed |
| S3-223523 | 17/11/2022 09:15:14 | available |
| S3-223524 | 17/11/2022 09:37:31 | approved |
| S3-223525 | 18/11/2022 13:19:31 | noted |
| S3-223525 | 18/11/2022 13:20:59 | revised |
| S3-223526 | 17/11/2022 09:14:09 | noted |
| S3-223527 | 14/11/2022 12:13:41 | revised |
| S3-223528 | 14/11/2022 12:19:55 | revised |
| S3-223529 | 14/11/2022 12:25:21 | revised |
| S3-223530 | 14/11/2022 12:22:48 | revised |
| S3-223531 | 15/11/2022 17:31:29 | revised |
| S3-223532 | 18/11/2022 12:52:48 | available |
| S3-223533 | 17/11/2022 09:45:48 | revised |
| S3-223534 | 17/11/2022 06:25:23 | noted |
| S3-223536 | 17/11/2022 09:58:57 | revised |
| S3-223536 | 18/11/2022 13:00:20 | noted |
| S3-223538 | 18/11/2022 13:02:27 | noted |
| S3-223539 | 17/11/2022 10:04:05 | available |
| S3-223540 | 17/11/2022 12:24:56 | revised |
| S3-223541 | 17/11/2022 17:22:21 | approved |
| S3-223542 | 18/11/2022 11:50:23 | available |
| S3-223543 | 16/11/2022 07:12:11 | revised |
| S3-223544 | 17/11/2022 13:32:18 | revised |
| S3-223545 | 16/11/2022 10:09:54 | approved |
| S3-223546 | 18/11/2022 12:06:29 | available |
| S3-223547 | 18/11/2022 12:06:33 | available |
| S3-223548 | 18/11/2022 12:06:35 | available |
| S3-223549 | 18/11/2022 12:06:38 | available |
| S3-223550 | 18/11/2022 12:07:10 | available |
| S3-223550 | 18/11/2022 12:45:04 | noted |
| S3-223551 | 16/11/2022 10:30:48 | revised |
| S3-223552 | 15/11/2022 12:14:49 | available |
| S3-223553 | 17/11/2022 06:37:27 | approved |
| S3-223554 | 17/11/2022 17:03:02 | approved |
| S3-223555 | 17/11/2022 07:43:16 | approved |
| S3-223556 | 17/11/2022 06:34:43 | revised |
| S3-223557 | 18/11/2022 06:43:47 | revised |
| S3-223558 | 16/11/2022 12:34:58 | revised |
| S3-223559 | 16/11/2022 12:42:19 | noted |
| S3-223560 | 18/11/2022 11:36:23 | available |
| S3-223561 | 18/11/2022 10:04:39 | available |
| S3-223562 | 17/11/2022 07:21:06 | revised |
| S3-223563 | 17/11/2022 14:55:55 | revised |
| S3-223564 | 17/11/2022 07:44:38 | approved |
| S3-223565 | 18/11/2022 13:08:08 | noted |
| S3-223566 | 17/11/2022 08:23:18 | noted |
| S3-223567 | 17/11/2022 09:46:24 | revised |
| S3-223568 | 18/11/2022 08:33:51 | noted |
| S3-223569 | 17/11/2022 06:25:07 | available |
| S3-223570 | 17/11/2022 07:16:43 | noted |
| S3-223571 | 17/11/2022 09:46:32 | revised |
| S3-223572 | 17/11/2022 07:44:48 | approved |
| S3-223573 | 15/11/2022 12:41:17 | available |
| S3-223574 | 18/11/2022 08:14:37 | available |
| S3-223575 | 17/11/2022 07:44:49 | approved |
| S3-223576 | 18/11/2022 11:09:15 | revised |
| S3-223577 | 17/11/2022 08:36:43 | revised |
| S3-223577 | 18/11/2022 12:18:07 | noted |
| S3-223578 | 18/11/2022 10:04:45 | available |
| S3-223579 | 17/11/2022 17:32:33 | revised |
| S3-223580 | 16/11/2022 14:37:18 | revised |
| S3-223581 | 16/11/2022 14:37:22 | revised |
| S3-223582 | 14/11/2022 15:01:15 | noted |
| S3-223583 | 14/11/2022 15:01:08 | revised |
| S3-223584 | 14/11/2022 10:09:25 | revised |
| S3-223585 | 16/11/2022 10:08:54 | revised |
| S3-223586 | 14/11/2022 17:16:37 | revised |
| S3-223587 | 18/11/2022 12:01:18 | approved |
| S3-223588 | 14/11/2022 13:18:59 | agreed |
| S3-223589 | 17/11/2022 06:30:40 | noted |
| S3-223590 | 15/11/2022 10:06:07 | noted |
| S3-223591 | 15/11/2022 10:06:09 | noted |
| S3-223592 | 16/11/2022 06:25:01 | available |
| S3-223593 | 17/11/2022 08:11:09 | available |
| S3-223593 | 17/11/2022 08:11:37 | approved |
| S3-223594 | 17/11/2022 08:11:53 | revised |
| S3-223595 | 17/11/2022 08:16:05 | noted |
| S3-223596 | 16/11/2022 06:35:53 | available |
| S3-223597 | 17/11/2022 16:49:32 | revised |
| S3-223598 | 18/11/2022 12:31:31 | noted |
| S3-223599 | 17/11/2022 16:49:36 | revised |
| S3-223600 | 17/11/2022 08:21:56 | noted |
| S3-223601 | 18/11/2022 12:31:49 | noted |
| S3-223602 | 14/11/2022 14:36:54 | agreed |
| S3-223603 | 14/11/2022 14:36:55 | agreed |
| S3-223604 | 14/11/2022 14:37:25 | agreed |
| S3-223604 | 14/11/2022 14:39:25 | revised |
| S3-223605 | 14/11/2022 14:37:25 | agreed |
| S3-223605 | 14/11/2022 14:39:29 | revised |
| S3-223606 | 15/11/2022 06:40:44 | revised |
| S3-223607 | 17/11/2022 17:29:19 | noted |
| S3-223608 | 18/11/2022 09:21:06 | noted |
| S3-223609 | 14/11/2022 08:17:59 | available |
| S3-223610 | 16/11/2022 09:36:09 | noted |
| S3-223611 | 16/11/2022 13:52:36 | noted |
| S3-223612 | 14/11/2022 10:35:49 | replied to |
| S3-223612 | 18/11/2022 08:00:00 | postponed |
| S3-223612 | 18/11/2022 09:15:47 | noted |
| S3-223613 | 18/11/2022 08:05:07 | noted |
| S3-223614 | 18/11/2022 09:17:52 | available |
| S3-223614 | 18/11/2022 09:18:25 | noted |
| S3-223615 | 18/11/2022 08:08:13 | noted |
| S3-223616 | 16/11/2022 09:20:50 | revised |
| S3-223617 | 18/11/2022 12:05:06 | available |
| S3-223618 | 18/11/2022 12:05:08 | available |
| S3-223619 | 14/11/2022 13:17:08 | revised |
| S3-223620 | 14/11/2022 07:47:20 | available |
| S3-223621 | 14/11/2022 07:57:49 | available |
| S3-223622 | 14/11/2022 09:50:08 | available |
| S3-223623 | 16/11/2022 07:34:59 | revised |
| S3-223624 | 16/11/2022 08:21:55 | revised |
| S3-223625 | 14/11/2022 08:22:31 | noted |
| S3-223625 | 16/11/2022 16:38:00 | merged |
| S3-223625 | 18/11/2022 08:09:13 | available |
| S3-223626 | 15/11/2022 15:39:39 | revised |
| S3-223627 | 15/11/2022 15:46:02 | noted |
| S3-223628 | 16/11/2022 08:03:48 | approved |
| S3-223629 | 16/11/2022 08:09:22 | revised |
| S3-223630 | 18/11/2022 12:53:03 | available |
| S3-223631 | 18/11/2022 07:10:49 | available |
| S3-223632 | 17/11/2022 06:34:58 | revised |
| S3-223633 | 17/11/2022 07:45:02 | approved |
| S3-223634 | 17/11/2022 06:35:03 | revised |
| S3-223635 | 18/11/2022 13:10:07 | approved |
| S3-223636 | 15/11/2022 15:49:27 | revised |
| S3-223637 | 17/11/2022 07:49:22 | approved |
| S3-223638 | 16/11/2022 08:12:35 | revised |
| S3-223639 | 18/11/2022 13:12:51 | noted |
| S3-223640 | 17/11/2022 06:35:08 | revised |
| S3-223641 | 18/11/2022 09:43:27 | available |
| S3-223642 | 17/11/2022 07:51:35 | noted |
| S3-223643 | 15/11/2022 15:53:00 | revised |
| S3-223644 | 16/11/2022 08:14:05 | revised |
| S3-223645 | 17/11/2022 08:14:08 | noted |
| S3-223646 | 14/11/2022 13:11:36 | revised |
| S3-223647 | 14/11/2022 13:12:25 | revised |
| S3-223648 | 14/11/2022 13:12:31 | revised |
| S3-223649 | 14/11/2022 07:47:14 | available |
| S3-223650 | 18/11/2022 06:53:17 | available |
| S3-223651 | 18/11/2022 12:05:11 | available |
| S3-223652 | 18/11/2022 12:05:14 | available |
| S3-223653 | 16/11/2022 10:24:42 | revised |
| S3-223654 | 16/11/2022 10:26:32 | revised |
| S3-223655 | 16/11/2022 10:29:50 | revised |
| S3-223656 | 18/11/2022 12:05:19 | available |
| S3-223657 | 17/11/2022 14:59:29 | revised |
| S3-223658 | 18/11/2022 12:16:01 | available |
| S3-223659 | 18/11/2022 09:44:46 | available |
| S3-223660 | 16/11/2022 17:08:40 | revised |
| S3-223661 | 17/11/2022 17:20:04 | approved |
| S3-223662 | 15/11/2022 06:44:09 | revised |
| S3-223663 | 16/11/2022 17:08:14 | revised |
| S3-223664 | 15/11/2022 15:05:58 | revised |
| S3-223665 | 16/11/2022 17:08:26 | revised |
| S3-223666 | 16/11/2022 07:24:00 | noted |
| S3-223667 | 16/11/2022 07:22:21 | noted |
| S3-223668 | 18/11/2022 12:37:10 | approved |
| S3-223669 | 16/11/2022 12:28:59 | approved |
| S3-223670 | 18/11/2022 12:37:41 | noted |
| S3-223671 | 15/11/2022 12:51:54 | available |
| S3-223672 | 18/11/2022 06:27:38 | agreed |
| S3-223673 | 17/11/2022 06:37:34 | noted |
| S3-223674 | 17/11/2022 08:01:00 | approved |
| S3-223675 | 17/11/2022 12:57:15 | revised |
| S3-223676 | 14/11/2022 08:31:53 | noted |
| S3-223677 | 15/11/2022 10:13:53 | agreed |
| S3-223678 | 15/11/2022 10:14:12 | agreed |
| S3-223679 | 15/11/2022 10:16:37 | agreed |
| S3-223680 | 15/11/2022 10:16:37 | agreed |
| S3-223681 | 15/11/2022 10:17:48 | agreed |
| S3-223682 | 15/11/2022 10:26:19 | revised |
| S3-223683 | 15/11/2022 10:29:58 | noted |
| S3-223684 | 15/11/2022 10:32:10 | revised |
| S3-223685 | 18/11/2022 07:27:10 | available |
| S3-223685 | 18/11/2022 13:41:36 | agreed |
| S3-223686 | 14/11/2022 08:07:58 | revised |
| S3-223687 | 18/11/2022 11:36:25 | available |
| S3-223688 | 18/11/2022 11:24:10 | approved |
| S3-223689 | 17/11/2022 15:03:19 | revised |
| S3-223690 | 17/11/2022 15:05:13 | revised |
| S3-223691 | 17/11/2022 15:09:07 | revised |
| S3-223692 | 16/11/2022 12:59:49 | noted |
| S3-223693 | 16/11/2022 12:44:16 | revised |
| S3-223694 | 18/11/2022 12:39:39 | noted |
| S3-223695 | 16/11/2022 06:35:58 | available |
| S3-223696 | 18/11/2022 13:31:14 | available |
| S3-223697 | 18/11/2022 13:31:17 | available |
| S3-223698 | 18/11/2022 13:32:35 | available |
| S3-223699 | 18/11/2022 13:32:37 | available |
| S3-223700 | 18/11/2022 13:32:40 | available |
| S3-223701 | 17/11/2022 06:38:31 | noted |
| S3-223702 | 17/11/2022 17:07:07 | revised |
| S3-223703 | 15/11/2022 12:14:27 | revised |
| S3-223704 | 15/11/2022 13:33:56 | available |
| S3-223704 | 17/11/2022 12:10:19 | revised |
| S3-223705 | 15/11/2022 13:06:33 | revised |
| S3-223706 | 15/11/2022 13:35:58 | agreed |
| S3-223707 | 14/11/2022 15:57:59 | available |
| S3-223708 | 18/11/2022 08:08:15 | noted |
| S3-223709 | 15/11/2022 10:33:23 | agreed |
| S3-223709 | 15/11/2022 10:39:35 | revised |
| S3-223710 | 16/11/2022 06:10:06 | available |
| S3-223710 | 18/11/2022 13:23:33 | revised |
| S3-223711 | 18/11/2022 06:51:01 | available |
| S3-223712 | 16/11/2022 06:11:37 | approved |
| S3-223713 | 16/11/2022 06:25:06 | available |
| S3-223714 | 16/11/2022 06:35:48 | revised |
| S3-223715 | 18/11/2022 11:47:10 | available |
| S3-223715 | 18/11/2022 11:47:21 | not treated |
| S3-223715 | 18/11/2022 11:47:24 | noted |
| S3-223716 | 18/11/2022 11:47:26 | available |
| S3-223717 | 16/11/2022 11:51:57 | revised |
| S3-223718 | 16/11/2022 09:56:20 | approved |
| S3-223719 | 16/11/2022 09:58:38 | revised |
| S3-223720 | 16/11/2022 09:35:40 | available |
| S3-223721 | 16/11/2022 07:39:01 | noted |
| S3-223722 | 15/11/2022 15:11:15 | revised |
| S3-223723 | 15/11/2022 15:54:39 | approved |
| S3-223724 | 15/11/2022 15:57:36 | revised |
| S3-223725 | 18/11/2022 12:05:21 | available |
| S3-223726 | 18/11/2022 12:05:24 | available |
| S3-223727 | 18/11/2022 12:05:45 | available |
| S3-223728 | 18/11/2022 12:05:52 | noted |
| S3-223729 | 18/11/2022 12:05:55 | available |
| S3-223730 | 18/11/2022 07:09:56 | noted |
| S3-223731 | 18/11/2022 08:08:19 | noted |
| S3-223732 | 18/11/2022 09:17:35 | noted |
| S3-223733 | 18/11/2022 09:17:46 | available |
| S3-223733 | 18/11/2022 09:18:28 | noted |
| S3-223734 | 18/11/2022 09:17:49 | available |
| S3-223734 | 18/11/2022 09:18:26 | noted |
| S3-223735 | 18/11/2022 07:12:38 | available |
| S3-223735 | 18/11/2022 07:14:11 | merged |
| S3-223736 | 18/11/2022 13:22:09 | noted |
| S3-223737 | 18/11/2022 13:22:16 | noted |
| S3-223738 | 18/11/2022 12:16:04 | available |
| S3-223739 | 18/11/2022 12:16:07 | available |
| S3-223740 | 18/11/2022 07:56:18 | noted |
| S3-223741 | 16/11/2022 16:51:15 | revised |
| S3-223742 | 15/11/2022 13:38:34 | revised |
| S3-223742 | 18/11/2022 06:39:04 | available |
| S3-223743 | 15/11/2022 12:20:55 | revised |
| S3-223744 | 15/11/2022 13:43:31 | available |
| S3-223745 | 15/11/2022 13:46:27 | available |
| S3-223746 | 17/11/2022 10:21:11 | revised |
| S3-223747 | 17/11/2022 10:22:29 | approved |
| S3-223748 | 17/11/2022 10:32:43 | approved |
| S3-223749 | 18/11/2022 12:52:50 | available |
| S3-223750 | 18/11/2022 12:52:52 | available |
| S3-223751 | 18/11/2022 12:53:21 | available |
| S3-223752 | 17/11/2022 10:26:26 | revised |
| S3-223753 | 17/11/2022 10:28:56 | revised |
| S3-223754 | 18/11/2022 12:52:55 | available |
| S3-223755 | 18/11/2022 12:53:00 | available |
| S3-223756 | 18/11/2022 12:52:58 | available |
| S3-223757 | 18/11/2022 13:13:46 | approved |
| S3-223758 | 18/11/2022 13:14:18 | approved |
| S3-223759 | 18/11/2022 13:14:57 | noted |
| S3-223760 | 18/11/2022 13:15:07 | noted |
| S3-223761 | 16/11/2022 17:04:42 | revised |
| S3-223762 | 18/11/2022 13:36:28 | noted |
| S3-223763 | 18/11/2022 09:45:27 | available |
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| S3-223766 | 15/11/2022 15:15:55 | revised |
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| S3-223768 | 16/11/2022 09:59:21 | approved |
| S3-223769 | 16/11/2022 09:35:50 | available |
| S3-223770 | 18/11/2022 13:16:03 | approved |
| S3-223771 | 18/11/2022 13:16:25 | approved |
| S3-223772 | 15/11/2022 12:18:22 | available |
| S3-223773 | 14/11/2022 15:29:42 | available |
| S3-223774 | 14/11/2022 15:39:14 | available |
| S3-223775 | 14/11/2022 15:29:45 | available |
| S3-223776 | 14/11/2022 15:39:18 | available |
| S3-223777 | 14/11/2022 13:26:37 | agreed |
| S3-223778 | 14/11/2022 15:38:13 | revised |
| S3-223779 | 14/11/2022 15:30:26 | revised |
| S3-223780 | 14/11/2022 15:39:38 | revised |
| S3-223781 | 14/11/2022 13:28:33 | agreed |
| S3-223782 | 14/11/2022 13:35:50 | available |
| S3-223783 | 15/11/2022 17:25:52 | revised |
| S3-223784 | 18/11/2022 12:05:57 | available |
| S3-223785 | 16/11/2022 17:04:34 | revised |
| S3-223786 | 18/11/2022 12:19:01 | available |
| S3-223787 | 18/11/2022 12:19:06 | available |
| S3-223788 | 18/11/2022 12:19:09 | available |
| S3-223789 | 16/11/2022 12:54:09 | noted |
| S3-223790 | 18/11/2022 12:16:12 | available |
| S3-223791 | 18/11/2022 12:16:23 | available |
| S3-223792 | 18/11/2022 12:16:10 | available |
| S3-223793 | 16/11/2022 12:57:14 | noted |
| S3-223794 | 16/11/2022 12:57:31 | noted |
| S3-223795 | 18/11/2022 12:06:01 | available |
| S3-223796 | 18/11/2022 12:18:37 | available |
| S3-223797 | 17/11/2022 08:19:37 | revised |
| S3-223797 | 18/11/2022 13:29:41 | noted |
| S3-223798 | 17/11/2022 08:27:27 | revised |
| S3-223799 | 17/11/2022 09:13:02 | withdrawn |
| S3-223800 | 14/11/2022 09:50:47 | noted |
| S3-223801 | 18/11/2022 07:56:27 | available |
| S3-223802 | 18/11/2022 12:07:13 | available |
| S3-223802 | 18/11/2022 12:45:04 | noted |
| S3-223803 | 18/11/2022 12:07:15 | available |
| S3-223803 | 18/11/2022 12:45:06 | noted |
| S3-223804 | 16/11/2022 12:25:12 | approved |
| S3-223805 | 16/11/2022 12:48:38 | revised |
| S3-223806 | 16/11/2022 12:50:28 | revised |
| S3-223807 | 15/11/2022 07:52:06 | noted |
| S3-223808 | 15/11/2022 09:33:50 | noted |
| S3-223809 | 18/11/2022 07:20:21 | available |
| S3-223810 | 15/11/2022 09:33:55 | available |
| S3-223811 | 18/11/2022 07:20:25 | available |
| S3-223812 | 15/11/2022 09:33:59 | available |
| S3-223813 | 18/11/2022 12:18:45 | available |
| S3-223814 | 18/11/2022 12:19:17 | available |
| S3-223815 | 18/11/2022 12:18:50 | available |
| S3-223816 | 18/11/2022 12:19:25 | available |
| S3-223817 | 18/11/2022 09:24:51 | noted |
| S3-223818 | 18/11/2022 09:31:41 | noted |
| S3-223819 | 15/11/2022 13:14:17 | noted |
| S3-223820 | 15/11/2022 13:14:19 | available |
| S3-223821 | 15/11/2022 13:14:23 | available |
| S3-223822 | 15/11/2022 12:59:54 | noted |
| S3-223823 | 15/11/2022 13:07:51 | available |
| S3-223824 | 15/11/2022 13:07:54 | available |
| S3-223826 | 18/11/2022 10:04:49 | available |
| S3-223827 | 17/11/2022 13:17:45 | available |
| S3-223828 | 17/11/2022 13:17:40 | revised |
| S3-223829 | 17/11/2022 06:43:32 | revised |
| S3-223830 | 16/11/2022 14:43:03 | noted |
| S3-223831 | 18/11/2022 06:51:20 | available |
| S3-223832 | 17/11/2022 14:40:23 | revised |
| S3-223833 | 14/11/2022 08:17:51 | revised |
| S3-223834 | 17/11/2022 12:02:45 | revised |
| S3-223835 | 18/11/2022 07:08:37 | available |
| S3-223836 | 16/11/2022 09:59:54 | approved |
| S3-223837 | 16/11/2022 10:01:26 | revised |
| S3-223838 | 16/11/2022 10:00:59 | revised |
| S3-223838 | 16/11/2022 10:01:23 | approved |
| S3-223839 | 16/11/2022 10:01:56 | revised |
| S3-223840 | 16/11/2022 09:32:30 | revised |
| S3-223841 | 17/11/2022 14:40:30 | revised |
| S3-223842 | 17/11/2022 14:40:40 | revised |
| S3-223843 | 17/11/2022 09:51:05 | revised |
| S3-223844 | 14/11/2022 10:00:46 | revised |
| S3-223845 | 14/11/2022 13:35:25 | revised |
| S3-223846 | 18/11/2022 06:54:59 | available |
| S3-223847 | 18/11/2022 07:10:03 | noted |
| S3-223848 | 17/11/2022 15:55:25 | available |
| S3-223849 | 17/11/2022 07:57:45 | available |
| S3-223850 | 17/11/2022 08:30:30 | revised |
| S3-223851 | 16/11/2022 13:25:17 | revised |
| S3-223852 | 16/11/2022 13:26:52 | revised |
| S3-223853 | 16/11/2022 13:27:26 | revised |
| S3-223854 | 18/11/2022 07:08:19 | available |
| S3-223855 | 18/11/2022 13:31:11 | available |
| S3-223856 | 16/11/2022 13:29:16 | revised |
| S3-223857 | 18/11/2022 12:27:29 | noted |
| S3-223858 | 18/11/2022 12:27:36 | noted |
| S3-223859 | 18/11/2022 12:28:03 | noted |
| S3-223860 | 14/11/2022 13:48:02 | agreed |
| S3-223860 | 18/11/2022 06:56:04 | conditionally agreed |
| S3-223860 | 18/11/2022 13:58:21 | agreed |
| S3-223861 | 17/11/2022 07:53:56 | revised |
| S3-223862 | 14/11/2022 09:53:50 | noted |
| S3-223863 | 16/11/2022 12:01:06 | revised |
| S3-223864 | 17/11/2022 17:11:16 | approved |
| S3-223865 | 17/11/2022 10:08:15 | revised |
| S3-223866 | 18/11/2022 13:02:24 | noted |
| S3-223867 | 18/11/2022 12:16:15 | available |
| S3-223868 | 17/11/2022 10:03:59 | revised |
| S3-223869 | 18/11/2022 13:34:08 | approved |
| S3-223870 | 16/11/2022 12:01:59 | revised |
| S3-223871 | 18/11/2022 12:16:18 | available |
| S3-223872 | 16/11/2022 10:03:21 | revised |
| S3-223873 | 17/11/2022 08:18:50 | noted |
| S3-223874 | 18/11/2022 11:36:30 | available |
| S3-223875 | 18/11/2022 11:36:36 | available |
| S3-223876 | 18/11/2022 12:15:59 | available |
| S3-223877 | 18/11/2022 12:16:20 | available |
| S3-223878 | 18/11/2022 12:18:40 | available |
| S3-223879 | 17/11/2022 09:09:56 | approved |
| S3-223880 | 14/11/2022 14:46:11 | revised |
| S3-223881 | 16/11/2022 13:49:54 | approved |
| S3-223882 | 18/11/2022 13:24:18 | noted |
| S3-223883 | 18/11/2022 09:17:55 | available |
| S3-223883 | 18/11/2022 09:18:23 | noted |
| S3-223884 | 14/11/2022 14:46:24 | revised |
| S3-223885 | 18/11/2022 09:17:58 | available |
| S3-223885 | 18/11/2022 09:18:24 | noted |
| S3-223886 | 18/11/2022 09:18:00 | available |
| S3-223886 | 18/11/2022 09:18:22 | noted |
| S3-223887 | 18/11/2022 12:28:11 | available |
| S3-223888 | 18/11/2022 13:32:30 | available |
| S3-223889 | 15/11/2022 06:54:03 | revised |
| S3-223890 | 15/11/2022 06:54:14 | revised |
| S3-223890 | 18/11/2022 14:23:42 | agreed |
| S3-223891 | 15/11/2022 06:56:06 | agreed |
| S3-223892 | 15/11/2022 06:56:13 | agreed |
| S3-223893 | 15/11/2022 06:56:15 | agreed |
| S3-223894 | 15/11/2022 16:06:18 | noted |
| S3-223895 | 17/11/2022 13:13:25 | noted |
| S3-223896 | 15/11/2022 06:59:05 | agreed |
| S3-223897 | 15/11/2022 06:59:01 | agreed |
| S3-223898 | 15/11/2022 06:59:00 | agreed |
| S3-223899 | 15/11/2022 06:58:59 | agreed |
| S3-223900 | 15/11/2022 06:58:58 | agreed |
| S3-223902 | 14/11/2022 10:43:33 | postponed |
| S3-223903 | 17/11/2022 15:13:46 | approved |
| S3-223903 | 21/11/2022 15:27:13 | revised |
| S3-223904 | 17/11/2022 15:15:16 | approved |
| S3-223905 | 18/11/2022 07:49:51 | noted |
| S3-223906 | 18/11/2022 08:09:32 | noted |
| S3-223907 | 17/11/2022 15:20:30 | approved |
| S3-223908 | 18/11/2022 07:52:32 | noted |
| S3-223909 | 17/11/2022 15:29:45 | withdrawn |
| S3-223910 | 17/11/2022 15:31:44 | approved |
| S3-223911 | 18/11/2022 07:55:48 | approved |
| S3-223912 | 18/11/2022 07:56:50 | noted |
| S3-223913 | 18/11/2022 07:58:22 | approved |
| S3-223914 | 17/11/2022 15:44:39 | approved |
| S3-223915 | 18/11/2022 07:59:02 | noted |
| S3-223916 | 18/11/2022 08:00:01 | withdrawn |
| S3-223916 | 18/11/2022 09:15:04 | noted |
| S3-223917 | 18/11/2022 13:55:45 | reserved |
| S3-223918 | 18/11/2022 13:56:19 | noted |
| S3-223919 | 18/11/2022 13:58:06 | approved |
| S3-223920 | 18/11/2022 13:57:13 | agreed |
| S3-223921 | 18/11/2022 08:03:47 | approved |
| S3-223922 | 18/11/2022 06:52:03 | agreed |
| S3-223923 | 18/11/2022 06:52:22 | agreed |
| S3-223924 | 18/11/2022 06:52:30 | agreed |
| S3-223925 | 14/11/2022 13:17:17 | reserved |
| S3-223926 | 18/11/2022 06:54:19 | reserved |
| S3-223927 | 18/11/2022 06:56:27 | reserved |
| S3-223927 | 19/11/2022 08:11:06 | withdrawn |
| S3-223928 | 18/11/2022 07:05:42 | agreed |
| S3-223929 | 14/11/2022 14:39:43 | agreed |
| S3-223930 | 14/11/2022 14:39:47 | agreed |
| S3-223931 | 18/11/2022 07:06:07 | reserved |
| S3-223932 | 18/11/2022 07:06:12 | reserved |
| S3-223933 | 18/11/2022 13:50:19 | approved |
| S3-223934 | 17/11/2022 15:50:11 | approved |
| S3-223935 | 18/11/2022 07:15:22 | agreed |
| S3-223936 | 18/11/2022 07:16:20 | agreed |
| S3-223937 | 18/11/2022 07:17:00 | agreed |
| S3-223938 | 18/11/2022 07:19:43 | reserved |
| S3-223939 | 18/11/2022 12:00:07 | noted |
| S3-223940 | 18/11/2022 14:04:30 | approved |
| S3-223941 | 18/11/2022 14:00:06 | agreed |
| S3-223942 | 18/11/2022 07:25:32 | reserved |
| S3-223943 | 18/11/2022 07:27:44 | withdrawn |
| S3-223944 | 18/11/2022 06:59:11 | agreed |
| S3-223944 | 18/11/2022 07:30:47 | revised |
| S3-223945 | 18/11/2022 07:01:54 | withdrawn |
| S3-223946 | 18/11/2022 07:02:12 | withdrawn |
| S3-223947 | 18/11/2022 07:02:26 | withdrawn |
| S3-223948 | 18/11/2022 08:08:06 | noted |
| S3-223949 | 15/11/2022 09:44:15 | agreed |
| S3-223950 | 18/11/2022 07:13:04 | reserved |
| S3-223951 | 18/11/2022 06:26:00 | agreed |
| S3-223952 | 15/11/2022 10:05:39 | noted |
| S3-223953 | 18/11/2022 06:28:27 | reserved |
| S3-223954 | 18/11/2022 13:54:15 | reserved |
| S3-223955 | 18/11/2022 06:29:58 | agreed |
| S3-223956 | 18/11/2022 06:31:39 | agreed |
| S3-223957 | 18/11/2022 06:32:46 | agreed |
| S3-223958 | 15/11/2022 12:26:23 | agreed |
| S3-223959 | 17/11/2022 07:04:17 | agreed |
| S3-223960 | 18/11/2022 06:33:57 | agreed |
| S3-223961 | 18/11/2022 06:34:24 | agreed |
| S3-223962 | 18/11/2022 06:35:22 | reserved |
| S3-223963 | 18/11/2022 09:26:17 | approved |
| S3-223964 | 18/11/2022 09:28:50 | approved |
| S3-223965 | 18/11/2022 09:29:58 | approved |
| S3-223966 | 18/11/2022 09:30:40 | approved |
| S3-223967 | 18/11/2022 09:31:23 | approved |
| S3-223968 | 18/11/2022 09:40:25 | approved |
| S3-223969 | 18/11/2022 09:32:41 | approved |
| S3-223970 | 18/11/2022 09:35:43 | approved |
| S3-223971 | 23/11/2022 13:41:21 | approved |
| S3-223972 | 18/11/2022 09:36:12 | approved |
| S3-223973 | 18/11/2022 09:41:28 | approved |
| S3-223974 | 18/11/2022 09:42:41 | approved |
| S3-223975 | 18/11/2022 09:44:06 | approved |
| S3-223976 | 18/11/2022 09:45:13 | approved |
| S3-223977 | 18/11/2022 09:45:56 | approved |
| S3-223978 | 23/11/2022 13:11:02 | approved |
| S3-223979 | 18/11/2022 12:57:42 | noted |
| S3-223980 | 18/11/2022 12:55:36 | approved |
| S3-223981 | 18/11/2022 12:56:26 | approved |
| S3-223982 | 18/11/2022 12:51:34 | approved |
| S3-223983 | 23/11/2022 09:11:09 | approved |
| S3-223984 | 18/11/2022 13:24:48 | approved |
| S3-223985 | 18/11/2022 13:26:10 | approved |
| S3-223986 | 18/11/2022 11:14:28 | approved |
| S3-223987 | 18/11/2022 11:14:53 | approved |
| S3-223988 | 18/11/2022 13:27:03 | approved |
| S3-223989 | 18/11/2022 13:27:15 | approved |
| S3-223990 | 18/11/2022 13:32:23 | approved |
| S3-223991 | 18/11/2022 11:16:50 | approved |
| S3-223992 | 18/11/2022 11:17:25 | approved |
| S3-223993 | 18/11/2022 11:18:01 | approved |
| S3-223994 | 18/11/2022 11:18:28 | approved |
| S3-223995 | 18/11/2022 09:47:07 | approved |
| S3-223996 | 18/11/2022 09:23:39 | approved |
| S3-223997 | 18/11/2022 09:27:35 | approved |
| S3-223998 | 18/11/2022 09:27:56 | approved |
| S3-223999 | 18/11/2022 09:28:26 | approved |
| S3-224000 | 18/11/2022 09:34:20 | approved |
| S3-224001 | 18/11/2022 09:34:48 | approved |
| S3-224002 | 18/11/2022 09:42:07 | approved |
| S3-224003 | 18/11/2022 09:43:12 | approved |
| S3-224004 | 18/11/2022 09:44:31 | approved |
| S3-224005 | 18/11/2022 09:29:37 | approved |
| S3-224006 | 18/11/2022 09:32:11 | approved |
| S3-224007 | 18/11/2022 09:35:10 | approved |
| S3-224008 | 18/11/2022 09:36:35 | approved |
| S3-224008 | 18/11/2022 09:39:05 | noted |
| S3-224009 | 18/11/2022 09:40:00 | approved |
| S3-224010 | 18/11/2022 11:40:44 | approved |
| S3-224011 | 18/11/2022 11:48:48 | approved |
| S3-224012 | 18/11/2022 12:03:22 | reserved |
| S3-224013 | 18/11/2022 11:49:39 | approved |
| S3-224014 | 18/11/2022 11:50:59 | approved |
| S3-224015 | 18/11/2022 11:51:36 | approved |
| S3-224016 | 23/11/2022 11:50:05 | approved |
| S3-224017 | 18/11/2022 11:52:03 | approved |
| S3-224018 | 18/11/2022 11:52:40 | approved |
| S3-224019 | 18/11/2022 11:53:27 | approved |
| S3-224020 | 18/11/2022 11:53:48 | approved |
| S3-224021 | 18/11/2022 11:54:10 | approved |
| S3-224022 | 18/11/2022 11:54:36 | approved |
| S3-224023 | 18/11/2022 11:58:42 | approved |
| S3-224024 | 23/11/2022 11:50:09 | approved |
| S3-224025 | 18/11/2022 12:04:11 | approved |
| S3-224026 | 18/11/2022 12:04:27 | approved |
| S3-224027 | 18/11/2022 12:04:42 | approved |
| S3-224028 | 18/11/2022 11:58:12 | approved |
| S3-224029 | 18/11/2022 09:26:58 | approved |
| S3-224030 | 18/11/2022 11:42:32 | approved |
| S3-224031 | 18/11/2022 12:59:32 | approved |
| S3-224032 | 18/11/2022 11:41:10 | approved |
| S3-224033 | 18/11/2022 10:05:23 | approved |
| S3-224034 | 18/11/2022 12:35:32 | approved |
| S3-224035 | 18/11/2022 12:35:39 | approved |
| S3-224036 | 23/11/2022 13:41:28 | approved |
| S3-224037 | 18/11/2022 12:36:19 | approved |
| S3-224038 | 18/11/2022 12:14:44 | approved |
| S3-224039 | 18/11/2022 12:15:00 | approved |
| S3-224040 | 18/11/2022 12:15:19 | approved |
| S3-224041 | 18/11/2022 12:15:26 | approved |
| S3-224042 | 18/11/2022 12:15:46 | approved |
| S3-224043 | 18/11/2022 12:38:08 | approved |
| S3-224044 | 18/11/2022 12:38:30 | approved |
| S3-224045 | 18/11/2022 12:39:02 | approved |
| S3-224046 | 18/11/2022 12:39:13 | approved |
| S3-224047 | 18/11/2022 12:20:02 | agreed |
| S3-224048 | 18/11/2022 12:20:30 | approved |
| S3-224049 | 18/11/2022 12:20:46 | approved |
| S3-224050 | 18/11/2022 12:20:47 | approved |
| S3-224051 | 18/11/2022 12:20:49 | approved |
| S3-224052 | 18/11/2022 12:20:54 | approved |
| S3-224053 | 18/11/2022 12:25:23 | approved |
| S3-224054 | 18/11/2022 12:25:34 | approved |
| S3-224055 | 18/11/2022 12:26:18 | approved |
| S3-224056 | 23/11/2022 09:11:17 | approved |
| S3-224057 | 18/11/2022 11:42:00 | approved |
| S3-224058 | 18/11/2022 11:42:30 | approved |
| S3-224059 | 18/11/2022 12:09:46 | approved |
| S3-224060 | 18/11/2022 12:09:52 | approved |
| S3-224061 | 23/11/2022 13:41:35 | approved |
| S3-224062 | 18/11/2022 12:11:04 | approved |
| S3-224063 | 18/11/2022 12:11:43 | approved |
| S3-224064 | 18/11/2022 12:12:18 | approved |
| S3-224065 | 18/11/2022 09:20:13 | noted |
| S3-224066 | 17/11/2022 17:17:24 | noted |
| S3-224067 | 18/11/2022 12:13:29 | approved |
| S3-224068 | 17/11/2022 16:16:27 | approved |
| S3-224069 | 18/11/2022 14:03:14 | noted |
| S3-224070 | 18/11/2022 13:26:38 | approved |
| S3-224071 | 18/11/2022 11:42:55 | approved |
| S3-224072 | 18/11/2022 13:35:26 | approved |
| S3-224073 | 18/11/2022 12:08:34 | approved |
| S3-224074 | 18/11/2022 12:09:50 | approved |
| S3-224075 | 18/11/2022 11:35:22 | approved |
| S3-224076 | 18/11/2022 11:35:59 | approved |
| S3-224077 | 18/11/2022 11:34:25 | approved |
| S3-224078 | 18/11/2022 11:40:10 | approved |
| S3-224079 | 18/11/2022 11:33:09 | approved |
| S3-224080 | 18/11/2022 13:49:04 | approved |
| S3-224081 | 18/11/2022 13:49:05 | approved |
| S3-224082 | 18/11/2022 13:49:08 | approved |
| S3-224083 | 18/11/2022 13:49:13 | approved |
| S3-224084 | 18/11/2022 13:49:17 | approved |
| S3-224085 | 18/11/2022 13:49:19 | approved |
| S3-224086 | 18/11/2022 13:49:21 | approved |
| S3-224087 | 18/11/2022 13:39:06 | agreed |
| S3-224088 | 18/11/2022 12:10:43 | approved |
| S3-224089 | 18/11/2022 13:51:17 | approved |
| S3-224090 | 18/11/2022 13:06:21 | noted |
| S3-224091 | 18/11/2022 13:07:26 | approved |
| S3-224092 | 18/11/2022 13:07:54 | approved |
| S3-224093 | 18/11/2022 12:42:27 | noted |
| S3-224094 | 18/11/2022 12:43:54 | approved |
| S3-224095 | 18/11/2022 09:46:40 | approved |
| S3-224096 | 23/11/2022 09:11:27 | approved |
| S3-224097 | 23/11/2022 09:11:28 | approved |
| S3-224098 | 23/11/2022 11:00:01 | approved |
| S3-224099 | 18/11/2022 13:27:38 | approved |
| S3-224100 | 18/11/2022 13:27:52 | approved |
| S3-224101 | 18/11/2022 12:14:25 | approved |
| S3-224102 | 18/11/2022 13:28:07 | approved |
| S3-224103 | 23/11/2022 11:15:42 | approved |
| S3-224104 | 18/11/2022 13:28:38 | approved |
| S3-224105 | 18/11/2022 14:38:13 | noted |
| S3-224106 | 18/11/2022 14:05:19 | approved |
| S3-224107 | 18/11/2022 13:29:36 | withdrawn |
| S3-224108 | 18/11/2022 13:30:44 | approved |
| S3-224109 | 23/11/2022 11:00:10 | approved |
| S3-224110 | 18/11/2022 13:31:04 | approved |
| S3-224111 | 18/11/2022 13:30:13 | approved |
| S3-224112 | 23/11/2022 11:15:47 | approved |
| S3-224113 | 18/11/2022 13:06:06 | noted |
| S3-224113 | 21/11/2022 13:27:32 | withdrawn |
| S3-224114 | 18/11/2022 10:00:42 | approved |
| S3-224115 | 18/11/2022 11:41:38 | approved |
| S3-224116 | 18/11/2022 12:40:56 | approved |
| S3-224117 | 18/11/2022 12:41:44 | noted |
| S3-224118 | 18/11/2022 12:42:59 | approved |
| S3-224119 | 18/11/2022 12:43:08 | approved |
| S3-224120 | 18/11/2022 14:06:30 | approved |
| S3-224121 | 18/11/2022 06:45:26 | approved |
| S3-224122 | 18/11/2022 06:46:13 | approved |
| S3-224123 | 18/11/2022 06:46:36 | approved |
| S3-224124 | 18/11/2022 12:32:42 | approved |
| S3-224125 | 18/11/2022 13:00:14 | withdrawn |
| S3-224126 | 17/11/2022 17:10:37 | approved |
| S3-224127 | 18/11/2022 13:00:40 | approved |
| S3-224127 | 18/11/2022 14:01:31 | noted |
| S3-224128 | 18/11/2022 12:52:43 | approved |
| S3-224129 | 23/11/2022 09:11:36 | approved |
| S3-224130 | 18/11/2022 12:52:13 | approved |
| S3-224131 | 18/11/2022 12:52:31 | approved |
| S3-224132 | 18/11/2022 13:39:35 | agreed |
| S3-224133 | 18/11/2022 06:38:16 | agreed |
| S3-224134 | 18/11/2022 10:04:20 | approved |
| S3-224135 | 18/11/2022 13:52:58 | reserved |
| S3-224135 | 23/11/2022 11:00:20 | approved |
| S3-224136 | 18/11/2022 11:45:20 | approved |
| S3-224137 | 18/11/2022 11:45:21 | approved |
| S3-224138 | 18/11/2022 11:21:28 | approved |
| S3-224139 | 18/11/2022 11:19:23 | approved |
| S3-224140 | 18/11/2022 11:20:13 | approved |
| S3-224141 | 18/11/2022 11:43:21 | approved |
| S3-224142 | 18/11/2022 12:32:09 | approved |
| S3-224143 | 18/11/2022 12:32:28 | approved |
| S3-224144 | 18/11/2022 11:27:38 | approved |
| S3-224145 | 18/11/2022 11:29:09 | approved |
| S3-224146 | 18/11/2022 11:25:05 | approved |
| S3-224147 | 18/11/2022 11:29:34 | approved |
| S3-224148 | 18/11/2022 11:30:04 | approved |
| S3-224149 | 18/11/2022 11:30:30 | approved |
| S3-224150 | 18/11/2022 11:31:48 | approved |
| S3-224151 | 18/11/2022 11:32:23 | approved |
| S3-224152 | 18/11/2022 12:22:15 | approved |
| S3-224152 | 18/11/2022 12:29:58 | noted |
| S3-224153 | 18/11/2022 12:22:17 | approved |
| S3-224153 | 18/11/2022 12:29:59 | noted |
| S3-224154 | 18/11/2022 12:30:01 | noted |
| S3-224155 | 18/11/2022 13:52:17 | approved |
| S3-224156 | 18/11/2022 13:52:18 | approved |
| S3-224157 | 18/11/2022 12:31:06 | approved |
| S3-224158 | 18/11/2022 12:31:13 | approved |
| S3-224159 | 17/11/2022 17:05:36 | approved |
| S3-224160 | 23/11/2022 09:11:44 | approved |
| S3-224161 | 18/11/2022 06:36:57 | agreed |
| S3-224162 | 23/11/2022 11:00:24 | approved |
| S3-224163 | 18/11/2022 13:54:59 | approved |
| S3-224164 | 23/11/2022 13:08:00 | approved |
| S3-224165 | 23/11/2022 09:12:03 | approved |
| S3-224166 | 23/11/2022 09:12:07 | approved |
| S3-224167 | 18/11/2022 06:11:46 | postponed |
| S3-224168 | 18/11/2022 06:12:31 | postponed |
| S3-224169 | 18/11/2022 13:53:17 | reserved |
| S3-224169 | 23/11/2022 11:16:47 | approved |
| S3-224170 | 18/11/2022 06:40:29 | agreed |
| S3-224171 | 18/11/2022 06:43:53 | agreed |
| S3-224172 | 18/11/2022 07:30:49 | agreed |
| S3-224173 | 18/11/2022 13:38:01 | agreed |
| S3-224174 | 18/11/2022 10:02:57 | noted |
| S3-224175 | 18/11/2022 12:35:01 | approved |
| S3-224176 | 18/11/2022 14:03:31 | approved |
| S3-224177 | 18/11/2022 12:49:26 | approved |
| S3-224178 | 23/11/2022 11:15:56 | approved |
| S3-224179 | 23/11/2022 09:12:14 | approved |
| S3-224180 | 23/11/2022 10:39:22 | approved |
| S3-224181 | 23/11/2022 11:50:17 | approved |
| S3-224182 | 18/11/2022 13:21:06 | approved |
| S3-224183 | 18/11/2022 13:23:39 | approved |
| S3-224184 | 21/11/2022 15:27:53 | approved |

## Annex B: List of change requests

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Document | Title | Source | Spec | CR | Rev | Rel | Cat | WI | Decision |
| S3-223187 | Clarification of hashing | BSI (DE) | 33.117 | 0081 | - | Rel-17 | F | eSCAS\_5G | not pursued |
| S3-223188 | Clarification of authorization verification | BSI (DE) | 33.117 | 0082 | - | Rel-17 | F | eSCAS\_5G | not pursued |
| S3-223189 | Clarification of brute force mitigation mechanism verification | BSI (DE) | 33.117 | 0083 | - | Rel-17 | F | SCAS | not pursued |
| S3-223945 | Clarification of brute force mitigation mechanism verification | BSI (DE) | 33.117 | 0083 | 1 | Rel-17 | F | eSCAS\_5G | withdrawn |
| S3-223190 | Clarification of privilege escalation methods to check for | BSI (DE) | 33.117 | 0084 | - | Rel-17 | F | SCAS | not pursued |
| S3-223946 | Clarification of privilege escalation methods to check for | BSI (DE) | 33.117 | 0084 | 1 | Rel-17 | F | eSCAS\_5G | withdrawn |
| S3-223191 | Clarification of service reachability restriction verification | BSI (DE) | 33.117 | 0085 | - | Rel-17 | F | eSCAS\_5G | not pursued |
| S3-223947 | Clarification of service reachability restriction verification | BSI (DE) | 33.117 | 0085 | 1 | Rel-17 | F | eSCAS\_5G | withdrawn |
| S3-223192 | Clarification of auto-launch verification | BSI (DE) | 33.117 | 0086 | - | Rel-17 | F | eSCAS\_5G | not pursued |
| S3-223193 | Clarification of SYN Flood attack prevention test | BSI (DE) | 33.117 | 0087 | - | Rel-17 | F | eSCAS\_5G | not pursued |
| S3-223194 | Clarification of privilege verification | BSI (DE) | 33.117 | 0088 | - | Rel-17 | F | eSCAS\_5G | not pursued |
| S3-223197 | Clarification of CGI/Scripting component directory check | BSI (DE) | 33.117 | 0089 | - | Rel-17 | F | eSCAS\_5G | not pursued |
| S3-223198 | Clarification of SSI System Command Excecution test | BSI (DE) | 33.117 | 0090 | - | Rel-17 | F | eSCAS\_5G | not pursued |
| S3-223602 | Clarification on TC\_ IP\_MULTICAST\_HANDLING | Huawei, HiSilicon | 33.117 | 0091 | - | Rel-16 | F | SCAS\_5G | agreed |
| S3-223603 | Clarification on TC\_ IP\_MULTICAST\_HANDLING | Huawei, HiSilicon | 33.117 | 0092 | - | Rel-17 | A | SCAS\_5G | agreed |
| S3-223604 | Clarification on IP\_FWD\_DISABLING | Huawei, HiSilicon | 33.117 | 0093 | - | Rel-16 | F | SCAS\_5G | revised |
| S3-223929 | Clarification on IP\_FWD\_DISABLING | Huawei, HiSilicon | 33.117 | 0093 | 1 | Rel-16 | F | SCAS\_5G | agreed |
| S3-223605 | Clarification on IP\_FWD\_DISABLING | Huawei, HiSilicon | 33.117 | 0094 | - | Rel-17 | A | SCAS\_5G | revised |
| S3-223930 | Clarification on IP\_FWD\_DISABLING | Huawei, HiSilicon | 33.117 | 0094 | 1 | Rel-17 | A | SCAS\_5G | agreed |
| S3-223880 | Remove password complexity criteria, password expiry and password history requirements | Ericsson | 33.117 | 0095 | - | Rel-16 | F | SCAS\_5G | revised |
| S3-223931 | Remove password complexity criteria, password expiry and password history requirements | Ericsson | 33.117 | 0095 | 1 | Rel-16 | F | SCAS\_5G | not pursued |
| S3-223884 | Remove password complexity criteria, password expiry and password history requirements | Ericsson | 33.117 | 0096 | - | Rel-17 | A | SCAS\_5G | revised |
| S3-223932 | Remove password complexity criteria, password expiry and password history requirements | Ericsson | 33.117 | 0096 | 1 | Rel-17 | A | SCAS\_5G | not pursued |
| S3-223646 | Rel-15 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | 33.122 | 0031 | - | Rel-15 | F | CAPIF-Sec | revised |
| S3-223922 | Rel-15 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | 33.122 | 0031 | 1 | Rel-15 | F | CAPIF-Sec | agreed |
| S3-223647 | Rel-16 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | 33.122 | 0032 | - | Rel-16 | A | CAPIF-Sec | revised |
| S3-223923 | Rel-16 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | 33.122 | 0032 | 1 | Rel-16 | A | CAPIF-Sec | agreed |
| S3-223648 | Rel-17 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | 33.122 | 0033 | - | Rel-17 | A | CAPIF-Sec | revised |
| S3-223924 | Rel-17 Correcting the OAuth 2.0 roles in CAPIF | Ericsson | 33.122 | 0033 | 1 | Rel-17 | A | CAPIF-Sec | agreed |
| S3-223889 | [MCPTT] 33179 R13 Incorrect example | Airbus | 33.179 | 0107 | - | Rel-13 | F | MCPTT | revised |
| S3-223944 | [MCPTT] 33179 R13 Incorrect example | Airbus | 33.179 | 0107 | 1 | Rel-13 | F | MCPTT | revised |
| S3-224172 | [MCPTT] 33179 R13 Incorrect example | Airbus | 33.179 | 0107 | 2 | Rel-13 | F | MCPTT | agreed |
| S3-223896 | [MCPTT] 33179 R13 Incorrect reference | Airbus | 33.179 | 0108 | - | Rel-13 | F | MCPTT | agreed |
| S3-223186 | [33.180] R18 MC client clarification | Motorola Solutions Danmark A/S | 33.180 | 0195 | - | Rel-18 | F | MCXSec3 | withdrawn |
| S3-223890 | [MCSec] 33180 R14 Incorrect example | Airbus | 33.180 | 0196 | - | Rel-14 | F | MCSec | agreed |
| S3-223891 | [eMCSec] Mirror 33180 R14 Incorrect example | Airbus | 33.180 | 0197 | - | Rel-15 | A | MCSec | agreed |
| S3-223892 | [MCXSec] Mirror 33180 R14 Incorrect example | Airbus | 33.180 | 0198 | - | Rel-16 | A | MCSec | agreed |
| S3-223893 | [MCXSec2] Mirror 33180 R14 Incorrect example | Airbus | 33.180 | 0199 | - | Rel-17 | A | MCSec | agreed |
| S3-223897 | [MCSec] 33180 R14 Incorrect reference | Airbus | 33.180 | 0200 | - | Rel-14 | F | MCSec | agreed |
| S3-223898 | [eMCSec] 33180 R15 Incorrect reference (Mirror) | Airbus | 33.180 | 0201 | - | Rel-15 | A | MCSec | agreed |
| S3-223899 | [MCXSec] 33180 R16 Incorrect reference (Mirror) | Airbus | 33.180 | 0202 | - | Rel-16 | A | MCSec | agreed |
| S3-223900 | [MCXSec2] 33180 R17 Incorrect reference (Mirror) | Airbus | 33.180 | 0203 | - | Rel-17 | A | MCSec | agreed |
| S3-223901 | [MCXSec3] 33180 R18 Incorrect reference (Mirror) | Airbus | 33.180 | 0204 | - | Rel-18 | A | MCXSec3 | withdrawn |
| S3-223619 | CR on AES-GCM/GMAC in IMS SIP security | Apple | 33.203 | 0266 | - | Rel-17 | C | eCryptPr | revised |
| S3-223925 | CR on AES-GCM/GMAC in IMS SIP security | Apple | 33.203 | 0266 | 1 | Rel-17 | C | eCryptPr | not pursued |
| S3-223214 | Introduction of DTLS 1.3 | Nokia, Nokia Shanghai Bell | 33.210 | 0075 | - | Rel-17 | B | NDS\_Backhaul, NDS\_Backhaul | withdrawn |
| S3-223557 | Allocate FC Value for 33.503 | ZTE Corporation | 33.220 | 0219 | - | Rel-17 | F | 5G\_ProSe | revised |
| S3-224171 | Allocate FC Value for 33.503 | ZTE Corporation | 33.220 | 0219 | 1 | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223332 | Resolving the EN on CAA level ID during UUAA procedures | Qualcomm Incorporated | 33.256 | 0009 | 2 | Rel-17 | F | ID\_UAS | not pursued |
| S3-223927 | Resolving the EN on CAA level ID during UUAA procedures | Qualcomm Incorporated | 33.256 | 0009 | 3 | Rel-17 | F | ID\_UAS | withdrawn |
| S3-223333 | Resolving the ENs on CAA level ID during revocation | Qualcomm Incorporated | 33.256 | 0011 | 2 | Rel-17 | F | ID\_UAS | revised |
| S3-223928 | Resolving the ENs on CAA level ID during revocation | Qualcomm Incorporated | 33.256 | 0011 | 3 | Rel-17 | F | ID\_UAS | agreed |
| S3-223418 | Address ENs in revocation procedures | Huawei, HiSilicon | 33.256 | 0017 | - | Rel-17 | F | ID\_UAS | merged |
| S3-223419 | Address ENs in UUAA procedures | Huawei, HiSilicon | 33.256 | 0018 | - | Rel-17 | F | ID\_UAS | merged |
| S3-223522 | Editorial change on USS authorization | Huawei, HiSilicon | 33.256 | 0019 | - | Rel-17 | F | ID\_UAS | agreed |
| S3-223662 | SECOP correction | Nokia, Nokia Shanghai Bell | 33.310 | 0137 | - | Rel-18 | A | TEI17 | revised |
| S3-223942 | SECOP correction | Nokia, Nokia Shanghai Bell | 33.310 | 0137 | 1 | Rel-17 | A | TEI16 | not pursued |
| S3-223672 | Editor's note resolution on NF instance id in cert profile | Nokia, Nokia Shanghai Bell | 33.310 | 0138 | - | Rel-17 | F | TEI17,5G\_eSBA | agreed |
| S3-223677 | Correct SCP certificate profile | Ericsson | 33.310 | 0139 | - | Rel-16 | F | 5G\_eSBA | agreed |
| S3-223678 | Correct SCP certificate profile | Ericsson | 33.310 | 0140 | - | Rel-17 | A | 5G\_eSBA | agreed |
| S3-223679 | Clarify SEPP intra-domain certificate profile | Ericsson, Nokia, Nokia Shanghai Bell | 33.310 | 0141 | - | Rel-16 | F | 5G\_eSBA | agreed |
| S3-223680 | Clarify SEPP intra-domain certificate profile | Ericsson, Nokia, Nokia Shanghai Bell | 33.310 | 0142 | - | Rel-17 | A | 5G\_eSBA | agreed |
| S3-223681 | Correct NF certificate profile | Ericsson | 33.310 | 0143 | - | Rel-17 | F | TEI17 | agreed |
| S3-223943 | SECOP correction | Nokia | 33.310 | 0144 | - | Rel-16 | F | TEI16 | withdrawn |
| S3-223685 | Aligning DNS and ICMP security for non-3GPP access with 3GPP access | Ericsson | 33.402 | 0147 | - | Rel-18 | F | TEI18 | endorsed |
| S3-223394 | User plane security for Non-SBA based interfaces | Nokia, Nokia Shanghai Bell | 33.501 | 1430 | 1 | Rel-17 | F | TEI17 | revised |
| S3-223949 | User plane security for Non-SBA based interfaces | Nokia, Nokia Shanghai Bell | 33.501 | 1430 | 2 | Rel-17 | F | TEI17 | agreed |
| S3-223709 | TargetNFServiceSetId to be part of access token claims | Nokia, Nokia Shanghai Bell | 33.501 | 1434 | 1 | Rel-17 | F | TEI17 | revised |
| S3-223955 | TargetNFServiceSetId to be part of access token claims | Nokia, Nokia Shanghai Bell | 33.501 | 1434 | 2 | Rel-17 | F | TEI17 | agreed |
| S3-223203 | Clarification on N32-f connection establishment with TLS | Nokia, Nokia Shanghai Bell | 33.501 | 1435 | 1 | Rel-17 | F | TEI17 | revised |
| S3-223951 | Clarification on N32-f connection establishment with TLS | Nokia, Nokia Shanghai Bell | 33.501 | 1435 | 2 | Rel-17 | F | TEI17 | agreed |
| S3-223825 | Clarification on N32-f connection establishment with TLS - SNPN use case | Nokia, Nokia Shanghai Bell | 33.501 | 1435 | 3 | Rel-17 | F | TEI17 | withdrawn |
| S3-223202 | CR NRF deployments | Nokia, Nokia Shanghai Bell, Ericsson, Mavenir, Huawei, HiSilicon | 33.501 | 1437 | 1 | Rel-18 | B | DUMMY | agreed |
| S3-223261 | Clarification on authorization for inter NF mobility | Nokia, Nokia Shanghai Bell | 33.501 | 1484 | - | Rel-17 | F | TEI17 | not pursued |
| S3-223262 | Correction in UPU procedure to align with stage 3 | Nokia, Nokia Shanghai Bell | 33.501 | 1485 | - | Rel-16 | F | TEI16 | not pursued |
| S3-223263 | Correction in UPU procedure to align with stage 3 | Nokia, Nokia Shanghai Bell | 33.501 | 1486 | - | Rel-17 | A | TEI16 | not pursued |
| S3-223264 | UPU procedure align with stage 3 for AMF not registered case | Nokia, Nokia Shanghai Bell | 33.501 | 1487 | - | Rel-17 | F | TEI17 | revised |
| S3-223938 | UPU procedure align with stage 3 for AMF not registered case | Nokia, Nokia Shanghai Bell | 33.501 | 1487 | 1 | Rel-17 | F | TEI17 | not pursued |
| S3-223331 | Clarification to the UPU procedures | Qualcomm Incorporated | 33.501 | 1488 | - | Rel-17 | F | TEI17, 5GS\_Ph1-SEC | not pursued |
| S3-223365 | Clarification on 5G MBS user-plane procedure | Qualcomm Incorporated | 33.501 | 1489 | - | Rel-17 | F | 5MBS | merged |
| S3-223398 | Revise the pre-requisite of access token request | China Telecommunications | 33.501 | 1490 | - | Rel-16 | F | 5G\_eSBA | withdrawn |
| S3-223399 | Revise the pre-requisite of access token request(mirror) | China Telecommunications | 33.501 | 1491 | - | Rel-17 | A | 5G\_eSBA | agreed |
| S3-223404 | Revise the pre-requisite of access token request | China Telecommunications | 33.501 | 1492 | - | Rel-16 | F | 5G\_eSBA | agreed |
| S3-223414 | Address EN1 on S-NSSAI mapping | Huawei, HiSilicon | 33.501 | 1493 | - | Rel-17 | F | TEI17 | not pursued |
| S3-223415 | Address EN2 on AF Authorization | Huawei, HiSilicon | 33.501 | 1494 | - | Rel-17 | F | TEI17 | merged |
| S3-223416 | Address issue in NSSAA procedures for multiple registration | Huawei, HiSilicon | 33.501 | 1495 | - | Rel-16 | F | TEI16 | not pursued |
| S3-223417 | Address issue in NSSAA procedures for multiple registration (mirror) | Huawei, HiSilicon | 33.501 | 1496 | - | Rel-17 | F | TEI17 | not pursued |
| S3-223518 | CR on Kiab handling in IAB migration\_new psk | Huawei, HiSilicon | 33.501 | 1497 | - | Rel-17 | F | TEI17 | not pursued |
| S3-223519 | CR on Kiab handling in IAB migration\_old psk | Huawei, HiSilicon | 33.501 | 1498 | - | Rel-17 | F | TEI17 | revised |
| S3-223950 | CR on Kiab handling in IAB migration\_old psk | Huawei, HiSilicon | 33.501 | 1498 | 1 | Rel-17 | F | TEI17 | not pursued |
| S3-223527 | CR on control-plane procedure in MBS | Huawei, HiSilicon | 33.501 | 1499 | - | Rel-17 | F | TEI17 | revised |
| S3-223917 | CR on control-plane procedure in MBS | Huawei, HiSilicon | 33.501 | 1499 | 1 | Rel-17 | F | TEI17 | not pursued |
| S3-223529 | CR on authentication in user plane procedure in MBS | Huawei, HiSilicon | 33.501 | 1500 | - | Rel-17 | F | TEI17 | revised |
| S3-223920 | CR on authentication in user plane procedure in MBS | Huawei, HiSilicon,Qualcomm | 33.501 | 1500 | 1 | Rel-17 | F | TEI17 | agreed |
| S3-223606 | clarification on PLMN ID verification in SNPN | Huawei, HiSilicon | 33.501 | 1501 | - | Rel-17 | F | TEI17 | revised |
| S3-223941 | clarification on PLMN ID verification in SNPN | Huawei, HiSilicon | 33.501 | 1501 | 1 | Rel-17 | F | TEI17 | agreed |
| S3-223631 | User consent clarification | Ericsson | 33.501 | 1502 | - | Rel-17 | F | UC3S\_SEC | not pursued |
| S3-223682 | SEPP to include and verify the source PLMN-ID | Ericsson, Mavenir, Nokia, Nokia Shanghai Bell | 33.501 | 1503 | - | Rel-17 | F | TEI17 | revised |
| S3-223953 | SEPP to include and verify the source PLMN-ID | Ericsson, Mavenir, Nokia, Nokia Shanghai Bell | 33.501 | 1503 | 1 | Rel-17 | F | TEI17 | not pursued |
| S3-223684 | Clarification on access token requests for NF Producers of a specific NF type and token-based authorization for indirect communication with delegated discovery | Ericsson | 33.501 | 1504 | - | Rel-18 | B | DUMMY | revised |
| S3-223954 | Clarification on access token requests for NF Producers of a specific NF type and token-based authorization for indirect communication with delegated discovery | Ericsson | 33.501 | 1504 | 1 | Rel-18 | B | DUMMY | not pursued |
| S3-223707 | Clarification to multiple registrations in different PLMNs\access types | Ericsson | 33.501 | 1505 | - | Rel-17 | F | TEI17 | not pursued |
| S3-223730 | Living document for SERP: draftCR to TS 33.501 on the Protection of the RRC Resume Request message | Samsung | 33.501 | 1506 | - | Rel-18 | C | SERP | not pursued |
| S3-223735 | [IAB] IAB inter-CU topology adaptation procedure | Samsung | 33.501 | 1507 | - | Rel-18 | B | TEI18 | not pursued |
| S3-223773 | CR\_33.501 R15 Update A.18 to define SoR-XMAC-IUE | Xiaomi Communication | 33.501 | 1508 | - | Rel-15 | F | TEI15 | not pursued |
| S3-223774 | CR\_33.501 R15 Update A.20 to define UPU-XMAC-IUE | Xiaomi Communication | 33.501 | 1509 | - | Rel-15 | D | TEI15 | not pursued |
| S3-223775 | CR\_33.501 R16 Update A.18 to define SoR-XMAC-IUE (mirror) | Xiaomi Communication | 33.501 | 1510 | - | Rel-16 | A | TEI15 | not pursued |
| S3-223776 | CR\_33.501 R16 Update A.20 to define UPU-XMAC-IUE (mirror) | Xiaomi Communication | 33.501 | 1511 | - | Rel-16 | D | TEI16 | not pursued |
| S3-223777 | CR\_33.501 R17 Remove the redundant part of Figure I.2.3.2-1 | Xiaomi Communication | 33.501 | 1512 | - | Rel-17 | F | TEI17 | agreed |
| S3-223778 | CR\_33.501 R17 Update A.17 for SoR transparent container | Xiaomi Communication | 33.501 | 1513 | - | Rel-17 | F | TEI17 | revised |
| S3-223936 | CR\_33.501 R17 Update A.17 for SoR transparent container | Xiaomi Communication | 33.501 | 1513 | 1 | Rel-17 | F | TEI17 | agreed |
| S3-223779 | CR\_33.501 R17 Update A.18 to define SoR-XMAC-IUE (mirror) | Xiaomi Communication | 33.501 | 1514 | - | Rel-17 | F | TEI17 | revised |
| S3-223935 | CR\_33.501 R17 Update A.18 to define SoR-XMAC-IUE (mirror) | Xiaomi Communication | 33.501 | 1514 | 1 | Rel-17 | F | TEI17 | agreed |
| S3-223780 | CR\_33.501 R17 Update A.20 to define UPU-XMAC-IUE (mirror) | Xiaomi Communication | 33.501 | 1515 | - | Rel-17 | F | TEI17 | revised |
| S3-223937 | CR\_33.501 R17 Update A.20 to define UPU-XMAC-IUE (mirror) | Xiaomi Communication | 33.501 | 1515 | 1 | Rel-17 | F | TEI17 | agreed |
| S3-223781 | CR\_33.501 R17 Update step 15 of clause I.2.2.2.1 | Xiaomi Communication | 33.501 | 1516 | - | Rel-17 | F | TEI17 | agreed |
| S3-223782 | CR\_33.501 R17 Update Subscription and unsubscription procedure of NSACF notification service | Xiaomi Communication | 33.501 | 1517 | - | Rel-17 | F | TEI17 | merged |
| S3-223809 | Add restriction for multi registrations in two PLMNs | Nokia, Nokia Shanghai Bell | 33.501 | 1518 | - | Rel-16 | F | TEI16 | not pursued |
| S3-223810 | control on NSSAA procedures for multi registrations in two PLMNs | Nokia, Nokia Shanghai Bell | 33.501 | 1519 | - | Rel-16 | F | TEI16 | not pursued |
| S3-223811 | Add restriction for multi registrations in two PLMNs | Nokia, Nokia Shanghai Bell | 33.501 | 1520 | - | Rel-17 | A | TEI16 | not pursued |
| S3-223812 | control on NSSAA procedures for multi registrations in two PLMNs | Nokia, Nokia Shanghai Bell | 33.501 | 1521 | - | Rel-17 | A | TEI16 | not pursued |
| S3-223845 | Clarification on AF authorization for the NSACF notification procedure | Ericsson | 33.501 | 1522 | - | Rel-17 | F | eNS2\_SEC | revised |
| S3-223926 | Clarification on AF authorization for the NSACF notification procedure | Ericsson | 33.501 | 1522 | 1 | Rel-17 | F | eNS2\_SEC | not pursued |
| S3-223846 | Alignment of NSACF notification procedure with existing procedures | Ericsson | 33.501 | 1523 | - | Rel-17 | F | eNS2\_SEC | not pursued |
| S3-223854 | Authentication for UE behind 5G-RG and FN-RG using NSWO | CableLabs | 33.501 | 1524 | - | Rel-17 | F | NSWO\_5G | not pursued |
| S3-223860 | Verification of NSSAIs for preventing slice attack | CableLabs, Ericsson, Nokia, Nokia Shanghai Bell | 33.501 | 1525 | - | Rel-18 | B | DUMMY | agreed |
| S3-223315 | Alignment of Link Identifier Update (LIU) procedure | InterDigital, Europe, Ltd. | 33.503 | 0042 | - | Rel-17 | F | 5G\_ProSe | revised |
| S3-224170 | Alignment of Link Identifier Update (LIU) procedure | InterDigital, Europe, Ltd. | 33.503 | 0042 | 1 | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223316 | Handling of PRUK desynchronization issue with 5G ProSe UE-to-Network Relay | InterDigital, Europe, Ltd. | 33.503 | 0043 | - | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223318 | Resolution of Remote UE permanent identity in Remote UE Report procedure (CP) | InterDigital, Europe, Ltd. | 33.503 | 0044 | - | Rel-17 | F | 5G\_ProSe | not treated |
| S3-223319 | Resolution of Remote UE permanent identity in Remote UE Report procedure (UP) | InterDigital, Europe, Ltd. | 33.503 | 0045 | - | Rel-17 | F | 5G\_ProSe | not treated |
| S3-223368 | Corrections in privacy protection of 5G ProSe UE-to-Network relay procedure | Qualcomm Incorporated | 33.503 | 0046 | - | Rel-17 | F | 5G\_ProSe | revised |
| S3-223957 | Corrections in privacy protection of 5G ProSe UE-to-Network relay procedure | Qualcomm Incorporated,eijing Xiaomi Mobile Software | 33.503 | 0046 | 1 | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223409 | Figure CR in 6.3.3.3.2 of TS33.503 | China Telecom Corporation Ltd.,CATT | 33.503 | 0047 | - | Rel-17 | F | 5G\_ProSe | merged |
| S3-223427 | Add a Note to address the subscription synchronization between PAnF and UDM | ZTE Corporation | 33.503 | 0048 | - | Rel-17 | F | 5G\_ProSe | not pursued |
| S3-223428 | Add functionality description of PAnF | ZTE Corporation | 33.503 | 0049 | - | Rel-17 | F | 5G\_ProSe | revised |
| S3-223961 | Add functionality description of PAnF | ZTE Corporation,CATT | 33.503 | 0049 | 1 | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223429 | Clarification of subscription information in PAnF | ZTE Corporation | 33.503 | 0050 | - | Rel-17 | F | 5G\_ProSe | revised |
| S3-223960 | Clarification of subscription information in PAnF | ZTE Corporation | 33.503 | 0050 | 1 | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223430 | Add FC Value in 33.503 | ZTE Corporation | 33.503 | 0051 | - | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223431 | Allocate FC Value for 33.503 | ZTE Corporation | 33.503 | 0052 | - | Rel-17 | F | 5G\_ProSe | withdrawn |
| S3-223462 | Clarifies to clause 6.3.5 to include the CP mechanism key identifier | Huawei, HiSilicon | 33.503 | 0053 | - | Rel-17 | F | 5G\_ProSe | merged |
| S3-223463 | Clarifies to the match report procedures under UE-to-Network relay scenario | Huawei, HiSilicon | 33.503 | 0054 | - | Rel-17 | F | 5G\_ProSe | merged |
| S3-223552 | Update to UE-to-Network relay security procedures | Huawei, HiSilicon | 33.503 | 0055 | - | Rel-17 | F | 5G\_ProSe | merged |
| S3-223573 | CR on Remote UE Authorization check before using 5GPRUK generate KNR\_ProSe | Huawei, HiSilicon | 33.503 | 0056 | - | Rel-17 | F | 5G\_ProSe | not pursued |
| S3-223671 | CR to TS33.503 PAnF definition and reference point to UDM | CATT | 33.503 | 0057 | - | Rel-17 | F | 5G\_ProSe | merged |
| S3-223702 | Correction to authentication mechanism selection | Ericsson, Xiaomi | 33.503 | 0058 | - | Rel-17 | F | 5G\_ProSe | revised |
| S3-224161 | Correction to authentication mechanism selection | Ericsson, Xiaomi | 33.503 | 0058 | 1 | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223703 | Renaming 5GPRUK, 5GPRUK ID, PRUK and PRUK ID | Ericsson | 33.503 | 0059 | - | Rel-17 | F | 5G\_ProSe | revised |
| S3-223956 | Renaming 5GPRUK, 5GPRUK ID, PRUK and PRUK ID | Ericsson,China Telecom, Huawei, HiSilicon,CATT | 33.503 | 0059 | 1 | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223704 | Correcting the handling of synchronisation error | Ericsson | 33.503 | 0060 | - | Rel-17 | F | 5G\_ProSe | revised |
| S3-224133 | Correcting the handling of synchronisation error | Ericsson | 33.503 | 0060 | 1 | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223705 | Nudm servcie operation correction | Ericsson | 33.503 | 0061 | - | Rel-17 | F | 5G\_ProSe | revised |
| S3-223962 | Nudm servcie operation correction | Ericsson | 33.503 | 0061 | 1 | Rel-17 | F | 5G\_ProSe | not pursued |
| S3-223706 | CP-PRUK refresh | Ericsson | 33.503 | 0062 | - | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223742 | DDNFM Selection during U2N Relay Discovery Security Procedure | Xiaomi Technology, Ericsson | 33.503 | 0063 | - | Rel-17 | F | 5G\_ProSe | not pursued |
| S3-223743 | Match Report in U2N Relay Discovery Security Procedure | Xiaomi Technology | 33.503 | 0064 | - | Rel-17 | F | 5G\_ProSe | revised |
| S3-223958 | Match Report in U2N Relay Discovery Security Procedure | Xiaomi Technology,Huawei, HiSilicon | 33.503 | 0064 | 1 | Rel-17 | F | 5G\_ProSe | agreed |
| S3-223744 | Security Method Check during U2N Relay Discovery Procedure | Xiaomi Technology | 33.503 | 0065 | - | Rel-17 | F | 5G\_ProSe | not pursued |
| S3-223745 | Updates to Key Definitions | Xiaomi Technology | 33.503 | 0066 | - | Rel-17 | F | 5G\_ProSe | not pursued |
| S3-223772 | Correction to privacy protection of UP-PRUK ID and RSC in DCR | Beijing Xiaomi Mobile Software | 33.503 | 0067 | - | Rel-17 | F | 5G\_ProSe | merged |
| S3-223820 | use relay UE SNN to generate AV for ProSe authentication | Nokia, Nokia Shanghai Bell | 33.503 | 0068 | - | Rel-17 | F | TEI17 | not pursued |
| S3-223821 | use remote UE SNN to generate AV for ProSe authentication | Nokia, Nokia Shanghai Bell | 33.503 | 0069 | - | Rel-17 | F | TEI17 | not pursued |
| S3-223823 | include RID of AUSF in DCR | Nokia, Nokia Shanghai Bell | 33.503 | 0070 | - | Rel-17 | F | TEI17 | not pursued |
| S3-223824 | include RID of AUSF in CP PRUK ID | Nokia, Nokia Shanghai Bell | 33.503 | 0071 | - | Rel-17 | F | TEI17 | not pursued |
| S3-223208 | Update gNB test case for UP integrity protection | Keysight Technologies UK Ltd | 33.511 | 0033 | - | Rel-17 | F | eSCAS\_5G | not pursued |
| S3-223336 | Corrections to the test cases in TS 33.511 | Qualcomm Incorporated | 33.511 | 0034 | - | Rel-16 | F | SCAS\_5G | agreed |
| S3-223337 | Corrections to the test cases in TS 33.511 | Qualcomm Incorporated | 33.511 | 0035 | - | Rel-17 | A | SCAS\_5G | agreed |
| S3-223338 | Corrections to the threat references in TS 33.511 | Qualcomm Incorporated | 33.511 | 0036 | - | Rel-16 | F | SCAS\_5G | agreed |
| S3-223339 | Corrections to the threat references in TS 33.511 | Qualcomm Incorporated | 33.511 | 0037 | - | Rel-17 | A | SCAS\_5G | agreed |
| S3-223340 | Adding non-Uu user plane text cases to TS 33.511 | Qualcomm Incorporated | 33.511 | 0038 | - | Rel-16 | F | SCAS\_5G | not pursued |
| S3-223341 | Adding non-Uu user plane text cases to TS 33.511 | Qualcomm Incorporated | 33.511 | 0039 | - | Rel-17 | A | SCAS\_5G | not pursued |
| S3-223206 | Clarification for IPSec in UPF interfaces | Keysight Technologies UK Ltd | 33.513 | 0008 | - | Rel-17 | F | eSCAS\_5G | not pursued |
| S3-223207 | Correction of requirement references in UPF test case | Keysight Technologies UK Ltd | 33.513 | 0009 | - | Rel-17 | F | eSCAS\_5G | agreed |
| S3-223266 | AKMA API enhancement based on the LS | Nokia, Nokia Shanghai Bell | 33.535 | 0139 | - | Rel-17 | F | AKMA | not pursued |
| S3-223424 | Add Context\_Remove into table 7.1.1-1 | ZTE Corporation | 33.535 | 0140 | - | Rel-17 | F | AKMA | not pursued |
| S3-223425 | Add MnF in clause 6.6.1and 6.7 | ZTE Corporation | 33.535 | 0141 | - | Rel-17 | F | AKMA | not pursued |
| S3-223426 | Add one note about AKMA subscription data and AKMA context asynchronization in clause 6.6.1 | ZTE Corporation | 33.535 | 0142 | - | Rel-17 | F | AKMA | not pursued |
| S3-223711 | AAnF sending GPSI to internal AKMA AF | China Mobile (Suzhou) Software | 33.535 | 0143 | - | Rel-17 | F | AKMA | not pursued |
| S3-223831 | KAF lifetime recommendations and Ua\* protocol requirements | Ericsson | 33.535 | 0144 | - | Rel-17 | F | AKMA | not pursued |
| S3-223588 | Addressing authentication and authorization for EDGE-9 | Huawei, HiSilicon | 33.558 | 0008 | - | Rel-17 | F | eEDGE\_5GC | agreed |
| S3-223650 | Correction and clarification in user consent requirements | Ericsson | 33.558 | 0009 | - | Rel-17 | F | eEDGE\_5GC | not pursued |
| S3-223569 | SCAS process enhancements | Huawei, HiSilicon | 33.916 | 0011 | - | Rel-18 | B | DUMMY | not pursued |
| S3-223334 | Correction to the gNB threats in TR 33.926 | Qualcomm Incorporated | 33.926 | 0062 | - | Rel-16 | F | SCAS\_5G | agreed |
| S3-223335 | Correction to the gNB threats in TR 33.926 | Qualcomm Incorporated | 33.926 | 0063 | - | Rel-17 | A | SCAS\_5G | agreed |
| S3-223456 | Adding AAnF critical assets and threats to TR 33.926 | China Mobile (Suzhou) Software | 33.926 | 0064 | - | Rel-18 | B | SCAS\_5G\_AAnF | withdrawn |

## Annex C: Lists of liaisons

### C1: Incoming liaison statements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Document | Original | Title | From | Decision | Reply TDoc |
| S3-223147 |  | 5G capabilities exposure for factories of the future - identified gaps | 5G-ACIA | postponed | (none) |
| S3-223148 |  | LS on clarification for UE\_NOT\_FOUND cause code for UP in CT1 | C1-226279 | replied to | S3-223903 |
| S3-223149 |  | LS on user’s consent for EDGEAPP | C3-223780 | replied to | S3-223904 |
| S3-223150 |  | LS on anonymous user access to an AF | C3-224730 | replied to | S3-223921 |
| S3-223151 |  | LS on Authentication Result Removal | C4-224418 | postponed | S3-223908 |
| S3-223152 |  | Reply LS on PLMN ID used in Roaming Scenarios | C4-224444 | postponed | S3-223909 |
| S3-223153 |  | Reply LS on handling of the modification policy in the IPX and receiving SEPP | C4-224467 | noted | (none) |
| S3-223154 |  | LS on Indication of Network Assisted Positioning method | C4-224626 | noted | (none) |
| S3-223155 |  | Reply LS on Facilitating roaming adoption across 3GPP NPN deployments | C6-220475 | noted | (none) |
| S3-223156 |  | Completion of SGP.22 v3.0 | GSMA | noted | (none) |
| S3-223157 |  | LS to 3GPP - Hosted SEPP | GSMA | replied to | S3-223910 |
| S3-223158 |  | Research highlighting potential need for granular level checks using ""Additional scope"" under the OAuth2.0 Token Access. | GSMA | postponed | (none) |
| S3-223159 |  | Re-use of CAPIF by ETSI MEC | ETSI ISG MEC | noted | (none) |
| S3-223160 |  | Reply LS on null security algorithm | R2-2208832 | noted | (none) |
| S3-223161 |  | Reply LS on authenticity and replay protection of system information | R2-2208985 | postponed | S3-223731 |
| S3-223162 |  | Reply LS on the user consent for trace reporting | R3-225250 | postponed | S3-223905 |
| S3-223163 |  | LS on user consent of Non-public Network | R3-226006 | postponed | S3-223906 |
| S3-223164 |  | Reply LS on Security architecture for 5G multicast/broadcast services | S2-2207390 | replied to | S3-223919 |
| S3-223165 |  | Reply LS On PLMN ID used in Roaming Scenarios | S2-2207391 | postponed | S3-223909 |
| S3-223166 |  | LS on protection of the URSP rules from HPLMN | S2-2207501 | replied to | S3-223911 |
| S3-223167 |  | Reply LS on Inter-PLMN Handover of VoLTE calls and idle mode mobility of IMS sessions | S2-2207697 | noted | (none) |
| S3-223168 |  | Questions for SUCI protection requirements for non-3GPP (WLAN) access to SNPN | S2-2207700 | replied to | S3-224175 |
| S3-223169 |  | LS Reply on EAC Mode for NSAC | S2-2209260 | noted | (none) |
| S3-223170 |  | Response LS on Identifier availability for Lawful Interception during Inter-PLMN handover | S2-2209262 | noted | (none) |
| S3-223171 |  | Response LS on Clarifications for AF specific UE ID retrieval | S2-2209270 | noted | (none) |
| S3-223172 |  | Reply LS on the impact of MSK update on MBS multicast session update procedure | S2-2209287 | postponed | S3-223918 |
| S3-223173 |  | LS on impact of URSP rule enforcement report to 5GC | S2-2209327 | postponed | S3-223912 |
| S3-223174 |  | LS on Satellite coverage data transfer to a UE using UP versus CP | S2-2209684 | noted | (none) |
| S3-223175 |  | Progress and open issues for NPN enhancements in Rel-18 | S2-2209860 | replied to | S3-224175 |
| S3-223176 |  | LS on Time Synchronization Status notification towards UE(s) | S2-2209876 | postponed | S3-223915 |
| S3-223177 |  | Reply LS on User plane solution for 5GC information exposure to UE | S2-2209910 | noted | (none) |
| S3-223178 |  | LS on User consent for Application Detection | S2-2209973 | replied to | S3-223907 |
| S3-223179 |  | Reply LS on User Consent Updating | S5-225321 | noted | (none) |
| S3-223180 |  | Forward on S6-222332, LS on Network federation interface for Telco edge consideration | S6-222543 | replied to | S3-223914 |
| S3-223181 |  | Reply LS on user’s consent for EDGEAPP | S6-222555 | noted | (none) |
| S3-223182 |  | LS on new work item X.5Gsec-ctrl: Security controls for operation and maintenance of 5G network systems | ITU-T SG17 | noted | (none) |
| S3-223183 |  | Reply LS on Facilitating roaming adoption across 3GPP NPN deployments | SP-220985 | noted | (none) |
| S3-223184 |  | LS from NG to 3GPP SA3 on IMS Data Channel Security Mode | GSMA | replied to | S3-223913 |
| S3-223185 |  | Facilitating roaming adoption across 3GPP NPN deployment | WBA | noted | (none) |
| S3-223195 |  | Reply LS on Re-use of CAPIF by ETSI MEC | S6-223027 | noted | (none) |
| S3-223196 |  | LS on Support PIN application architecture and interaction | S6-223028 | replied to | S3-224068 |
| S3-223612 |  | LS to inform about the new GSMA Task Force | GSMA | noted | S3-223916 |
| S3-223862 |  | Response LS on Identifier availability for Lawful Interception during Inter-PLMN handover | S3i220660 | noted | (none) |
| S3-223902 |  | Specification of the 256-bit air interface algorithms | ETSI SAGE | postponed | (none) |
| S3-224167 |  | LS reply on CAPIF authorization roles related to FS\_SNAAPP | S6-223489 | postponed | (none) |
| S3-224168 |  | LS reply on SNAAPP requirements clarifications | S6-223488 | postponed | (none) |

### C2: Outgoing liaison statements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Document | Title | To | Cc | reply to i/c LS |
| S3-223904 | Reply LS on User Consent for EDGEAPP | CT3 | SA2, SA6, CT4 | S3-223149 |
| S3-223907 | Reply LS on User consent for Application Detection | SA2 | - | S3-223178 |
| S3-223910 | LS to GSMA DESS on SEPP certificates | GSMA | - | S3-223157 |
| S3-223911 | Reply LS on protection of the URSP rules from HPLMN | SA2 | CT1 | S3-223166 |
| S3-223913 | Reply LS on the IMS Data Channel Security Mode | GSMA NG/UPG | SA2,SA3-LI | S3-223184 |
| S3-223914 | Reply LS on Network federation interface for Telco edge consideration | 3GPP SA6, 3GPP SA2, 3GPP SA5, 3GPP SA | 3GPP CT, 3GPP CT1, 3GPP CT3, 3GPP CT4 | S3-223180 |
| S3-223919 | Reply LS on Security architecture for 5G multicast/broadcast services | SA2 | SA4 | S3-223164 |
| S3-223921 | LS reply on AKMA API | CT3 | - | S3-223150 |
| S3-223934 | LS on IMS SCAS to GSMA | GSMA NESASG | - | - |
| S3-224068 | Reply LS on Support PIN application architecture and interaction | SA WG6 | - | S3-223196 |
| S3-224175 | Reply LS on Progress and open issues for NPN enhancements in Rel-18 | SA2 | SA1, CT1, CT3, CT4, RAN2, RAN3 | S3-223175,S3-223168 |

## Annex D: List of agreed/approved new and revised Work Items

|  |  |  |  |
| --- | --- | --- | --- |
| Document | Title | Source | new/revised |
| S3-224047 | Revised SID on Security aspects for 5WWC Phase 2 | Nokia, Nokia Shanghai Bell, CableLabs, Lenovo, Apple | SID revised |
| S3-223959 | DTLS for AKMA WID | ZTE Corporation | WID new |
| S3-224087 | WID on SBA security | Nokia, Nokia Shanghai Bell | WID new |
| S3-224132 | New WID on IETF OSCORE protocol profiles for GBA and AKMA | Ericsson | WID new |
| S3-224173 | New WID on HONTRA | Huawei, HiSilicon | WID new |

## Annex E: List of draft Technical Specifications and Reports

|  |  |  |  |
| --- | --- | --- | --- |
| Document | Spec | vers | Doc title |
| S3-223971 | 33.740 | 0.4.0 | Draft TR 33.740 |
| S3-223978 | 33.898 | 0.3.0 | Draft TR 33.898 |
| S3-223983 | 33.875 | 1.5.0 | Draft TR 33.875 |
| S3-224016 | 33.741 | 0.4.0 | draft TR 33.741 |
| S3-224024 | 33.739 | 0.4.0 | Draft TR 33.739 |
| S3-224036 | 33.858 | 0.3.0 | Draft TR 33.858 |
| S3-224056 | 33.887 | 0.4.0 | Draft TR 33.887 |
| S3-224061 | 33.882 | 0.4.0 | Draft TR 33.882 |
| S3-224096 | 33.936 | 0.4.0 | Draft TR 33.936 |
| S3-224097 | 33.927 | 0.3.0 | Draft TR 33.927 |
| S3-224098 | 33.537 | 0.3.0 | Draft TR 33.537 |
| S3-224103 | 33.742 | 0.3.0 | Draft TR 33.742 |
| S3-224106 | 33.884 | 0.3.0 | Draft TR 33.884 |
| S3-224109 | 33.737 | 0.4.0 | Draft TR 33.737 |
| S3-224112 | 33.891 | 0.4.0 | Draft TR 33.891 |
| S3-224120 | 33.883 | 0.4.0 | Draft TR 33.883 |
| S3-224129 | 33.893 | 0.4.0 | Draft TR 33.893 |
| S3-224160 | 33.877 | 0.4.0 | Draft TR 33.877 |
| S3-224162 | 33.894 | 0.4.0 | Draft TR 33.894 |
| S3-224163 | 33.526 | 0.4.0 | Draft TS 33.526 |
| S3-224164 | 33.870 | 0.5.0 | Draft TR 33.870 |
| S3-224165 | 33.876 | 0.5.0 | Draft TR 33.876 |
| S3-224166 | 33.700-28 | 0.2.0 | Draft TR 33.700-28 |
| S3-224178 | 33.738 | 0.4.0 | Draft TR 33.738 |
| S3-224179 | 33.890 | 0.4.0 | Draft TR 33.890 |
| S3-224180 | 33.892 | 0.4.0 | Draft TR 33.892 |
| S3-224181 | 33.896 | 0.4.0 | Draft TR 33.896 |

## Annex F: List of participants

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| TITLE | Family Name | Given Name | Employer Organization | Organization Represented | Organization Represented Category Code |
| Mr. | Aghili | Behrouz | Apple GmbH | Apple Operations Europe Ltd | ETSI |
| Mr. | Ahmad | Saad | InterDigital, Inc. | InterDigital Belgium. LLC | ETSI |
| Dr. | Baboescu | Florin | BROADCOM CORPORATION | BROADCOM CORPORATION | ETSI |
| Dr. | BAGAYOKO | Abdoulaye | Ericsson France S.A.S | Ericsson France S.A.S | ETSI |
| Dr. | Bari | Farooq | AT&T | AT&T GNS Belgium SPRL | ETSI |
| Dr. | Baskaran | Sheeba Backia Mary | Motorola Mobility Germany GmbH | Motorola Mobility France S.A.S | ETSI |
| Dr. | Ben Henda | Noamen | Huawei Technologies Sweden AB | Huawei Technologies Sweden AB | ETSI |
| Mr. | Bhatt | Rakshesh P. | Nokia Japan | Nokia Japan | ARIB |
| Mr. | Bilca | Michael | OTD | OTD | ETSI |
| Dr. | Bishnoi | Pritam | TSDSI | TSDSI | TSDSI |
| Mr. | Bjerrum | Bo Holm | Nokia Corporation | Nokia Denmark | ETSI |
| Mr. | Bleckert | Peter | Ericsson LM | Ericsson Japan K.K. | ARIB |
| Dr. | Bouazizi | Imed | Qualcomm Incorporated | Qualcomm Korea | TTA |
| Mr. | Brusilovsky | Alec | InterDigital, Inc. | InterDigital, Inc. | ETSI |
| Mr. | Cano Soveri | Mirko | ETSI | ETSI | ETSI |
| Mr. | Canterbury | Mark | Tencastle Limited | National Technical Assistance | ETSI |
| Dr. | Cetinkaya | Egemen | Verizon UK Ltd | Verizon Denmark | ETSI |
| Dr. | Chan | Yee Sin | Meta Ireland | Facebook India | TSDSI |
| Dr. | Chaudhari | Amar | IIIT Delhi | IIT Delhi | TSDSI |
| Dr. | Chavanne | Jean-Pascal | Ofcom (CH) | Ofcom (CH) | ETSI |
| Dr. | Chen | Hung-chen | FGI | Asia Pacific Telecom co. Ltd | ETSI |
| Dr. | CHEN | LI | vivo Mobile Communication Co., | vivo Mobile Com. (Chongqing) | CCSA |
| Mr. | Chen | Xiaozhong | CATT | CATT | ETSI |
| Ms. | Chen | Yuqin | Apple R&D | Apple (Guizhou) | CCSA |
| Ms. | Chen | Zhuoyi | China Telecom Corporation Ltd. | Esurfing IoT | CCSA |
| Mr. | Cheng | Hong | Qualcomm Incorporated | QUALCOMM Europe Inc. - Spain | ETSI |
| Dr. | Cheng | Peng | Apple | Apple Electronics | CCSA |
| Dr. | Chiba | Tsunehiko | VIAVI Solutions | VIAVI Solutions | ETSI |
| Mr. | CHIN | ChenHo | Guangdong OPPO Mobile Telecom. | OPPO | ETSI |
| Mr. | Chitturi | Suresh | Samsung Electronics Co., Ltd | Samsung Electronics Nordic AB | ETSI |
| Ms. | Cho | Min Kyoung | Deloitte Tohmatsu Cyber LLC | KDDI Corporation | TTC |
| Dr. | Choe | HyunJung | LG Electronics France | LG Electronics Polska | ETSI |
| Mr. | Choi | Hongjin | Samsung R&D Institute UK | Harman GmbH | ETSI |
| Dr. | Chou | ChieMing | FGI | FGI | CCSA |
| Mr. | Chou | Joey | Intel Corporation (UK) Ltd | Intel Korea, Ltd. | TTA |
| Mr. | Chuberre | Nicolas | THALES | THALES | ETSI |
| Mr. | Cichonski | Jeffrey | NIST | NIST | ATIS |
| Mr. | COLLET | Hervé | THALES | THALES | ETSI |
| Mr. | Cong | Shi | Guangdong OPPO Mobile Telecom. | Chongqing Angying | CCSA |
| Dr. | Corbett | Cherita | Johns Hopkins University APL | Johns Hopkins University APL | ATIS |
| Mr. | Doerr | Johannes | BMWK | BMWK | ETSI |
| Mr. | Eckel | Charles | Cisco Systems Belgium | Cisco Systems Belgium | ETSI |
| Miss | Eitoku | Haruka | NTT corporation | NTT | TTC |
| Dr. | Escott | Adrian | Qualcomm CDMA Technologies | Qualcomm Israel Ltd. | ETSI |
| Mr. | Espi | Sergi | G+D MS | G+D MS | ETSI |
| Mr. | Evans | Tim P. | VODAFONE Group Plc | Vodafone España SA | ETSI |
| Mr. | Everett | Jared | Johns Hopkins University APL | Johns Hopkins University APL | ATIS |
| Mr. | Fan | Jiangsheng | OPPO | OnePlus | CCSA |
| Dr. | Featherstone | Walter | Apple France | Apple Distribution Intl Ltd | ETSI |
| Mr. | Ferdi | Samir | InterDigital, Inc. | InterDigital, Europe, Ltd. | ETSI |
| Mr. | Fine | Jean-Yves | THALES | THALES | ETSI |
| Mr. | Gabay | David | MITRE Corporation | MITRE Corporation | ETSI |
| Mr. | Gadhai | Shyam Vijay | IIT Kanpur | IIT Kanpur | TSDSI |
| Mr. | Gamishev | Todor | Orange | Orange Spain | ETSI |
| Mr. | Gao | Jiajin | China Mobile Com. Corporation | CMDI | CCSA |
| Mr. | GAO | Lei | E-surfing Digital | E-surfing Digital | CCSA |
| Dr. | Gao | Qiubin | CATT | CICT | CCSA |
| Dr. | Garcia-Morchon | Oscar | Philips International B.V. | Philips International B.V. | ETSI |
| Mr. | Gautam | Deepanshu | Samsung R&D Institute UK | Samsung Electronics Polska | ETSI |
| Ms. | Gauthier | Sandrine | Airbus | Airbus | ETSI |
| Mrs. | Godoy | Gabriela | SDI Squared | SDI Squared | ETSI |
| Dr. | Gogou | Vassiliki | ENISA | ENISA | ETSI |
| Mr. | Goldberg | Martin | U.S. National Security Agency | U.S. National Security Agency | ATIS |
| Ms. | Gong | Ruby | Beijing Xiaomi Mobile Software | Xiaomi EV Technology | CCSA |
| Mr. | Guo | Boren | OPPO Beijing | ZEKU | CCSA |
| Ms. | Guo | Ivy | Apple Computer Trading Co. Ltd | Apple Czech s.r.o. | ETSI |
| Mr. | Gupta | Nishant | Qualcomm Technologies Int | Qualcomm India Pvt Ltd | TSDSI |
| Mr. | Gupta | Varini | Samsung R&D Institute India | BEIJING SAMSUNG TELECOM R&D | CCSA |
| Mr. | Gupta | Vivek | Apple Gesellschaft m.b.H. | Apple Lithuania UAB | ETSI |
| Dr. | Han | Jaemin | Intel Technology India Pvt Ltd | Intel Romania | ETSI |
| Mr. | Hanhisalo | Markus | Ericsson LM | Ericsson LM | ETSI |
| Mr. | Harper | Colby | Pivotal Commware | Pivotal Commware | ATIS |
| Mr. | HASHMI | DANISH EHSAN | Samsung R&D Institute India | Samsung Electronics Iberia SA | ETSI |
| Mr. | Hayes | Stephen | Ericsson LM | Ericsson India Private Limited | TSDSI |
| Ms. | Heo | Youn hyoung | Intel Corporation (UK) Ltd | Intel China Ltd. | CCSA |
| Mr. | Hoffpauir | Dusty | Charter Communications, Inc | Charter Communications, Inc | ATIS |
| Ms. | Hu | Haijing | Apple Switzerland AG | Apple AB Finland | ETSI |
| Mr. | Hu | Roy | Guangdong OPPO Mobile Telecom. | OPPO Beijing | CCSA |
| Miss | Hu | Yushuang | China Mobile Com. Corporation | CMDI | CCSA |
| Mr. | Huang | Zhenning | China Mobile Com. Corporation | China Mobile Group Device Co. | CCSA |
| Mr. | Hwang | Chungwoo | KT Corp. | KT Corp. | TTA |
| Mr. | Inoue | Yoshihiro | NTT | NTT Advanced Technology Corpor | TTC |
| Miss | Jerichow | Anja | Nokia Germany | Nokia UK | ETSI |
| Dr. | Jiang | Tianji | China Mobile Com. Corporation | China Mobile Com. Corporation | CCSA |
| Dr. | Jost | Christine | Ericsson LM | Ericsson Hungary Ltd | ETSI |
| Ms. | Kang | Yanchao | vivo Mobile Communication Co., | vivo Communication Technology | CCSA |
| Mr. | Kapale | Kiran | Samsung R&D Institute India | Samsung Electronics France SA | ETSI |
| Dr. | Karakoc | Ferhat | Ericsson LM | Ericsson GmbH, Eurolab | ETSI |
| Miss | ke | xiaowan | vivo Mobile Communication Co., | vivo Mobile Com. (Chongqing) | CCSA |
| Miss | Kedalagudde | Meghashree D | Intel Deutschland GmbH | Intel Corporation SAS | ETSI |
| Dr. | Keesmaat | Iko | TNO | TNO | ETSI |
| Dr. | Khan | Mohsin | Ericsson LM | Oy LM Ericsson AB | ETSI |
| Mr. | Khare | Saurabh | Nokia Germany | Nokia Solutions & Networks (I) | TSDSI |
| Mr. | Kim | Anbin | LG Electronics France | LG Electronics France | ETSI |
| Dr. | Kim | Hongil | Qualcomm Incorporated | Qualcomm Austria RFFE GmbH | ETSI |
| Dr. | Kim | Hyunsook | LG Electronics Inc. | LG Electronics Inc. | TTA |
| Dr. | Kim | Laeyoung | LG Electronics France | LG Electronics UK | ETSI |
| Ms. | Kim | Sunhee | LG Electronics France | LG Electronics Deutschland | ETSI |
| Dr. | Kimba | Boubacar | vivo Mobile Communication Co., | GUANGDONG GENIUS TECHNOLOGY CO | CCSA |
| Mr. | Kiss | Krisztian | Apple (UK) Limited | Apple EPE | ETSI |
| Mr. | Kolekar | Abhijeet | Intel Corporation (UK) Ltd | Intel | ATIS |
| Ms. | Koser | Elizabeth | U.S. National Security Agency | U.S. National Security Agency | ATIS |
| Mr. | Kuchibhotla | Ravi | Motorola Mobility UK Ltd. | Motorola Mobility UK Ltd. | ETSI |
| Mr. | Kumar | Lalith | Samsung R&D Institute India | Samsung Electronics Czech | ETSI |
| Dr. | Kunz | Andreas | Motorola Mobility Germany GmbH | Motorola Mobility UK Ltd. | ETSI |
| Dr. | Kuo | Ping-Heng Wallace | Apple (UK) Limited | Apple Trading | CCSA |
| Mr. | Lair | Yannick | Nokia France | Nokia France | ETSI |
| Mr. | Laitinen | Mika | Airbus | Airbus | ETSI |
| Mr. | Landgraf | Rainer | ZITiS | ZITiS | ETSI |
| Mr. | Lazara | Dominic | Motorola Solutions UK Ltd. | Motorola Solutions UK Ltd. | ETSI |
| Mr. | Leadbeater | Alex | BT plc | BT plc | ETSI |
| Dr. | Lee | Duckey | Samsung R&D Institute UK | Samsung Electronics Benelux BV | ETSI |
| Mr. | Lee | Xiaoyang | CISA ECD | CISA ECD | ATIS |
| Dr. | Lei | Ao | HUAWEI TECHNOLOGIES Co. Ltd. | Huawei Technologies Japan K.K. | TTC |
| Dr. | Lei | Zander (Zhongding) | HuaWei Technologies Co., Ltd | Huawei Technologies R&D UK | ETSI |
| Mr. | Leung | Nikolai | Qualcomm CDMA Technologies | Qualcomm Technologies Int | ETSI |
| Ms. | Li | Chenyi | China Unicom | Unicompay | CCSA |
| Dr. | Li | Haitao | Guangdong OPPO Mobile Telecom. | Shenzhen Heytap | CCSA |
| Mr. | Li | He | HUAWEI TECHNOLOGIES Co. Ltd. | Huawei Device Co., Ltd | CCSA |
| Mrs. | Li | Jianxiang | CATT | GOHIGH DATA NETWORKS TECH. | CCSA |
| Mr. | LI | Nanxi | China Telecomunication Corp. | China Telecomunication Corp. | CCSA |
| Mr. | Libunao | Gerardo | Verizon UK Ltd | Verizon UK Ltd | ETSI |
| Mr. | Liebhart | Rainer | Nokia Germany | Nokia Germany | ETSI |
| Miss | Lin | Lin | China Unicom | Unicom Broadband Online | CCSA |
| Miss | Lin | Wan-Chen | FGI | Asia Pacific Telecom co. Ltd | ETSI |
| Mr. | LIU | Jianning(Carry) | Beijing Xiaomi Software Tech | Beijing Xiaomi Electronics | CCSA |
| Miss | Liu | Peilin | ZTE Corporation | ZTE Corporation. | CCSA |
| Mr. | Liu | Yue | China Mobile Com. Corporation | China Mobile International Ltd | CCSA |
| Mr. | Liu | Yuze | ZTE Corporation | ZTE Corporation | ETSI |
| Dr. | Lohmar | Thorsten | Ericsson LM | Nanjing Ericsson Panda Com Ltd | CCSA |
| Mr. | Lopez | Luis | Oracle Corporation | Oracle Corporation | ETSI |
| Mr. | Lottin | Philippe | Orange | Orange | ETSI |
| Mr. | Loushine | Mike | AT&T | AT&T | ATIS |
| Mr. | Lu | Fei | Guangdong OPPO Mobile Telecom. | Chengdu OPPO Telecommunication | CCSA |
| Ms. | Lu | Wei | Xiaomi Technology | Xiaomi Technology | CCSA |
| Mr. | Luetzenkirchen | Thomas | Intel Deutschland GmbH | Intel Deutschland GmbH | ETSI |
| Mr. | Ly | Quang | Convida Wireless | Convida Wireless | ETSI |
| Mr. | Lyu | Huazhang | vivo Mobile Communication Co., | iQoo | CCSA |
| Mr. | M Vamanan | Sudeep | Apple AB | Apple Benelux B.V. - Belgium | ETSI |
| Mr. | Ma | Ruitao | China Unicom | VSENS | CCSA |
| Mr. | Magnabosco | Philippe | ENISA | ENISA | ETSI |
| Mr. | Manganahalli Jayaprakash | Sandesh | TNO | KPN N.V. | ETSI |
| Mr. | MAO | Yuxin | Beijing Xiaomi Mobile Software | Xiaomi Communications | CCSA |
| Miss | Martinez Tarradell | Marta | Intel | Intel Corporation Italia SpA | ETSI |
| Mr. | Mayer | Georg | HUAWEI TECHNOLOGIES Co. Ltd. | HUAWEI TECHNOLOGIES Co. Ltd. | ETSI |
| Mr. | Minokuchi | Atsushi | NTT DOCOMO INC. | NTT DOCOMO INC. | TTC |
| Ms. | Mori | Misato | DENSO AUTOMOTIVE | DENSO AUTOMOTIVE | ETSI |
| Dr. | MTITA | Collins | Ericsson France S.A.S | Ericsson Telecomunicazioni SpA | ETSI |
| Dr. | Muhanna | Ahmad | Mavenir | Mavenir | ETSI |
| Dr. | Mukherjee | Soumava | IIT JODHPUR | IIT JODHPUR | TSDSI |
| Dr. | Mustapha | Mona | Apple France | Apple Inc | ATIS |
| Mr. | Nair | Suresh | Nokia Germany | Nokia Corporation | ETSI |
| Mr. | NAKAMURA | Kazuo | NICT | NICT | ARIB |
| Dr. | Nakano | Yuto | KDDI Corporation | KDDI Corporation | TTC |
| Mr. | Nas | Peter | F5 Networks Inc. | F5 | ETSI |
| Mr. | Nayak | Ashok Kumar | Samsung R&D Institute India | Samsung Electronics GmbH | ETSI |
| Mr. | Negalaguli | Harish | Motorola Solutions UK Ltd. | Motorola Solutions Poland | ETSI |
| Mr. | Niang | Mamadou M. | Verizon UK Ltd | Verizon Spain | ETSI |
| Dr. | Nuggehalli | Pavan | Google Inc. | Google Inc. | ATIS |
| Mr. | O'Driscoll | James | NCSC | NCSC | ETSI |
| Mr. | Oettl | Martin | Nokia Germany | Nokia Shanghai Bell | CCSA |
| Mr. | Orkopoulos | Stawros | Nokia Germany | Nokia Italy | ETSI |
| Mr. | Palanigounder | Anand | Qualcomm Technologies Int | Qualcomm Tech. Netherlands B.V | ETSI |
| Dr. | Palat | Sudeep | Intel Corporation (UK) Ltd | Intel Corporation (UK) Ltd | ETSI |
| Mr. | Palle | Naveen | Apple Hungary Kft. | Apple (Ulanqab) | CCSA |
| Mr. | Pan | Xiang | vivo Mobile Communication Co., | Nanjing Weibo | CCSA |
| Ms. | Parambath Sasi | NIvedya | Samsung R&D Institute India | Samsung R&D Institute India | TSDSI |
| Mr. | Park | Sang Min | Google Inc. | Google Inc. | ATIS |
| Mr. | Parsel | Mike | T-Mobile USA | T-Mobile USA Inc. | ATIS |
| Dr. | Pashalidis | Andreas | BSI (DE) | BSI (DE) | ETSI |
| Mr. | Pätzold | Thomas | Deutsche Telekom AG | Deutsche Telekom AG | ETSI |
| Mrs. | Pauliac | Mireille | THALES | THALES | ETSI |
| Mr. | Peinado | German | Nokia Germany | Nokia Poland | ETSI |
| Mr. | Pica | Francesco | Qualcomm Incorporated | Qualcomm CDMA Technologies | ETSI |
| Mr. | Pudney | Chris | VODAFONE Group Plc | VODAFONE Group Plc | ETSI |
| Mr. | Qi | Minpeng | China Mobile Research Inst. | China Mobile Com. Corporation | CCSA |
| Mr. | RAGUENET | Alain | THALES | THALES | ETSI |
| Mr. | Rajadurai | Rajavelsamy | Samsung R&D Institute UK | Samsung Electronics Co., Ltd | TTA |
| Ms. | Rajendran | Rohini | Samsung R&D Institute India | SAMSUNG R&D INSTITUTE JAPAN | ARIB |
| Mr. | Ramamoorthy | Arunprasath | Samsung R&D Institute India | Samsung Guangzhou Mobile R&D | CCSA |
| Dr. | Ramanath | Sreenath | Lekha Wireless Solutions | Lekha Wireless Solutions | TSDSI |
| Mr. | Rath | Paresh | U.S. Department of Defense | U.S. Department of Defense | ATIS |
| Mr. | Rathod | Niraj | Ericsson LM | Ericsson-LG Co., LTD | TTA |
| Mr. | Ren | Chi | China Unicom | CITC | CCSA |
| Mrs. | Rong | Wu | HUAWEI TECHNOLOGIES Co. Ltd. | HUAWEI Technologies Japan K.K. | ARIB |
| Mr. | Rossbach | Ralf | Apple GmbH | Apple Advertising (Beijing) | CCSA |
| Mr. | Rudolph | Hans Christian | Deloitte Tohmatsu Cyber LLC | KDDI Corporation | TTC |
| Dr. | Saha | Dhiman | IIT Bhilai | IIT Bhilai | TSDSI |
| Dr. | Salkintzis | Apostolis | Motorola Mobility UK Ltd. | Motorola Mobility España SA | ETSI |
| Mr. | Sällberg | Krister | Ericsson LM | Ericsson Inc. | ATIS |
| Ing. | Sánchez | Antonio | Keysight Technologies UK Ltd | Keysight Technologies UK Ltd | ETSI |
| Dr. | sanderovich | Amichai | Wiliot Ltd. | Wiliot Ltd. | ETSI |
| Mr. | Schirra | Christoph | BMWK | BMWK | ETSI |
| Dr. | Sedjelmaci | Hichem | Ericsson France S.A.S | L.M. Ericsson Limited | ETSI |
| Mr. | Shah | Sapan | Samsung R&D Institute India | Samsung R&D Institute UK | ETSI |
| Dr. | Shailendra | Samar | Intel Technology India Pvt Ltd | Intel Technology India Pvt Ltd | TSDSI |
| Ms. | Shen | Yang | Beijing Xiaomi Mobile Software | Beijing Xiaomi Mobile Software | ETSI |
| Ms. | Shi | Xiaonan | China Mobile Com. Corporation | China Mobile E-Commerce Co. | CCSA |
| Mr. | Shi | Xiaoyan | Intel | Intel Ireland | ETSI |
| Dr. | SHI | Zhihua | Guangdong OPPO Mobile Telecom. | Hangzhou Douku | CCSA |
| Miss | Singh | Vishakha | CEWiT | CEWiT | TSDSI |
| Mr. | SINHA | UTSAV | Samsung R&D Institute India | Samsung Research America | ATIS |
| Ms. | So | Tricci | OPPO | Orope Germany GmbH | ETSI |
| Mr. | Soloway | Alan | Qualcomm Technologies Int | Qualcomm Incorporated | ATIS |
| Mrs. | song | hua | China Mobile Com. Corporation | China Mobile (Suzhou) Software | CCSA |
| Mr. | Song | Yue | China Mobile Com. Corporation | China Mobile (Hangzhou) Inf. | CCSA |
| Dr. | Speicher | Sebastian | Qualcomm CDMA Technologies | Qualcomm Europe Inc. Sweden | ETSI |
| Mr. | Srinivasan | Suresh | Intel | Intel K.K. | ARIB |
| Mrs. | Stanetsky | Nataliya | Google Ireland Limited | Google Inc. | ATIS |
| Mr. | Starsinic | Michael | InterDigital, Inc. | InterDigital France R&D, SAS | ETSI |
| Dr. | Staufer | Markus | Nokia Germany | Nokia Hungary | ETSI |
| Mr. | Stefano | Faccin | QUALCOMM Europe Inc. - Italy | QUALCOMM Europe Inc. - Italy | ETSI |
| Dr. | Stockhammer | Thomas | Qualcomm CDMA Technologies | Qualcomm Technologies Ireland | ETSI |
| Mr. | Stojanovski | Saso | Intel Deutschland GmbH | Intel Finland Oy | ETSI |
| Mr. | Su | Xin | CATT | CICT | ETSI |
| Dr. | Subidh | Ali SK | IIT Bhilai | IIT Delhi |  |
| Mrs. | Subudhi | Jyotirmayee | Indian Institute of Tech (M) | Indian Institute of Tech (M) | TSDSI |
| Mr. | SUN | Jiancheng | CATT | Fiberhome Technologies Group | CCSA |
| Dr. | Sun | Tao | China Mobile M2M Company Ltd. | China Mobile M2M Company Ltd. | CCSA |
| Ms. | Sun | Xiaowen | vivo Mobile Communication Co., | vivo Mobile Communication (H) | CCSA |
| Mr. | Suzuki | Yuji | NTT DOCOMO INC. | NTT DOCOMO INC. | ARIB |
| Mr. | Tangudu | Narendranath Durga | Samsung R&D Institute India | Samsung Electronics Co., Ltd | TTA |
| Mr. | Thiebaut | Laurent | Nokia France | Nokia Belgium | ETSI |
| Dr. | Tian | Li | ZTE Corporation. | ZTE Corporation. | CCSA |
| Mr. | Tiwari | Kundan | NEC Corporation | NEC Corporation | ARIB |
| Dr. | Tonesi | Dario Serafino | Qualcomm CDMA Technologies | Qualcomm Finland RFFE Oy | ETSI |
| Mr. | Tossou | Bruno | Orange | Orange Romania | ETSI |
| Mr. | Trygar | Tobey | Peraton Labs | Peraton Labs | ATIS |
| Dr. | Tsiatsis | Vlasios | Ericsson LM | Ericsson España S.A. | ETSI |
| Mr. | Varga | Imre | Qualcomm CDMA Technologies | QUALCOMM JAPAN LLC. | ARIB |
| Mr. | Volnay | Christophe | ETSI | ETSI | ETSI |
| Mr. | Vujcic | Dragan | IDEMIA | IDEMIA | ETSI |
| Dr. | Wan | Tao | CableLabs | CableLabs | ETSI |
| Dr. | Wang | Da | CATT | Datang Linktester Technology | CCSA |
| Mr. | Wang | Guanzhou | InterDigital Communications | InterDigital Finland Oy | ETSI |
| Ms. | Wang | Hui | vivo Communication Technology | GUANGDONG GENIUS TECHNOLOGY CO | CCSA |
| Dr. | Wang | Zhaoning | China Unicom | CUG | CCSA |
| Dr. | Wang | Zhibi | InterDigital Communications | InterDigital Communications | ATIS |
| Ms. | WEI | QUN | China Unicom | BTPDI | CCSA |
| Mr. | Whorlow | Colin | NCSC | HOME OFFICE | ETSI |
| Ms. | Wifvesson | Monica | Ericsson LM | Ericsson Limited | ETSI |
| Mr. | Wild | Peter A. | Vodafone GmbH | Vodafone GmbH | ETSI |
| Mr. | Wong | Marcus | OPPO | Hangzhou Mengyuxiang | CCSA |
| Mr. | Woodward | Tim | Motorola Solutions Danmark A/S | Motorola Solutions Danmark A/S | ETSI |
| Dr. | Wu | Deh-Min Richard | Charter Communications, Inc | Charter Communications, Inc | ATIS |
| Ms. | WU | Jinhua | Beijing Xiaomi Mobile Software | Beijing Xiaomi Software Tech | CCSA |
| Mr. | Wu | Xiaobo | vivo Communication Technology | vivo Mobile Communication Co., | CCSA |
| Mr. | Wu | Zhibin | Apple Europe Limited | Apple Solutions | CCSA |
| Dr. | XIAO | Xiao | vivo Mobile Communication Co., | iQoo | CCSA |
| Mr. | Xie | Zhenhua | vivo Mobile Communication Co., | vivo Mobile Communication (S) | CCSA |
| Mr. | Xing | TianQi | China Unicom | CU Digital Technology | CCSA |
| Ms. | Xing | Yanping | CATT | Datang Mobile Com. Equipment | CCSA |
| Mr. | Xu | Yang | Guangdong OPPO Mobile Telecom. | OPPO (chongqing) Intelligence | CCSA |
| Mr. | Yamauchi | Kenta | NTT DOCOMO INC. | DOCOMO Beijing Labs | CCSA |
| Dr. | Yang | Ning | Guangdong OPPO Mobile Telecom. | Guangdong OPPO Mobile Telecom. | CCSA |
| Dr. | Yang | Tang | Apple AB | Apple Technical Services | CCSA |
| Dr. | Yao | Ge | China Unicom | China Unicom | CCSA |
| Mr. | Yao | Yizhi | Intel Corporation (UK) Ltd | Intel Technology Poland SP Zoo | ETSI |
| Ms. | Yi | Haofan | BJTU | BJTU | CCSA |
| Mr. | You | Shilin | ZTE Corporation. | ZTE Wistron Telecom AB | ETSI |
| Mr. | Youn | Myungjune | LG Electronics France | LG Electronics Finland | ETSI |
| Mr. | Yu | Hang | vivo Mobile Com. (Chongqing) | Nanjing Weibo | CCSA |
| Dr. | Zeng | Erlin | CATT | CATT | CCSA |
| Dr. | Zeng | Wei | Apple Europe Limited | Apple AB Denmark | ETSI |
| Dr. | Zhang | Amy | vivo Japan KK | VIVO TECH GmbH | ETSI |
| Dr. | Zhang | Bo | HUAWEI TECHNOLOGIES Co. Ltd. | Huawei Telecommunication India | TSDSI |
| Dr. | Zhang | Dawei | Apple France | Apple France | ETSI |
| Mr. | Zhang | Yizhong | vivo Mobile Communication (S) | vivo Japan KK | ARIB |
| Dr. | Zhao | Shuai | Intel | Intel Sweden AB | ETSI |
| Mr. | Zhou | Jingyi | Dish Network | Dish Network | ATIS |
| Mr. | Zhou | Xutao | vivo Communication Technology | vivo Japan KK | ARIB |
| Mr. | Zhu | Chunhui | Beijing Xiaomi Mobile Software | Beijing Xiaomi Mobile Software | CCSA |
| Mr. | Zhu | Jianchi | China Telecommunications | China Telecommunications | ETSI |
| Mr. | Zisimopoulos | Haris | Qualcomm Technologies Int | Qualcomm France | ETSI |
| Dr. | Zugenmaier | Alf | NTT DOCOMO INC. | DOCOMO Communications Lab. | ETSI |

## Annex G: List of future meetings

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Title | Start date | End date (OP) | Town | Country | Reference |
| SA3#110-bis - CANCELLED | 2023-04-17 | 2023-04-21 | TBD | US | S3-110 |
| SA3#110-bis-e | 2023-04-17 | 2023-04-21 | Online |  | S3-110 |
| SA3#89-LI | 2023-04-24 | 2023-04-28 | Washington DC | US | S3-89-LI |
| SA3#111 | 2023-05-22 | 2023-05-26 | Berlin | Germany | S3-111 |
| SA3#90-LI | 2023-06-26 | 2023-06-30 | EU | EU | S3-90-LI |
| SA3#112 | 2023-08-14 | 2023-08-18 | EU | EU | S3-112 |
| SA3#113 | 2023-11-06 | 2023-11-10 | Chicago | US | S3-113 |
| SA3#114 | 2024-01-22 | 2024-01-26 | TBD |  | S3-114 |
| SA3#115 | 2024-02-26 | 2024-03-01 | EU | EU | S3-115 |
| SA3#116-(option 1) | 2024-05-13 | 2024-05-17 | Korea | KR | S3-116 |
| SA3#116-(option 2) | 2024-05-20 | 2024-05-24 | TBD |  | S3-116 |
| SA3#117 | 2024-08-26 | 2024-08-30 | EU | EU | S3-117 |
| SA3#118 | 2024-10-07 | 2024-10-11 | India | IN | S3-118 |
| SA3#119 | 2024-11-11 | 2024-11-15 | US TBC | US | S3-119 |