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

**Meeting Report  
for  
TSG SA WG3  
meeting: 102Bis-e**

**Electronic meeting, Online, 01/03/2021 to 05/03/2021**

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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.

**S3-210810 Agenda**

*Type: agenda For: (not specified)  
 Source: WG Chair*

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

**S3-210811 E-meeting procedures**

*Type: other For: (not specified)  
 Source: WG Chair*

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

**S3-211171 Study item management and planning**

*Type: other For: Information  
 Source: WG Chair*

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

**S3-211173 Process and agenda presentation for SA3#102Bis-e**

*Type: other For: Information  
 Source: SA WG3 chair*

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

## 2 Studies areas

### 2.1 Study on 5G security enhancement against false base stations

**S3-210975 MitM FBS Detection**

*Type: pCR For: Approval  
 33.809 v0.12.1  
 Source: Huawei, HiSilicon, Philips*

**Decision:** The document was **revised to S3-211261**.

**S3-211027 5GFBS-Adding evaluation for solution#4**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: Apple*

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

**S3-211028 5GFBS-Adding evaluation for solution#17**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: Apple*

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

**S3-211029 5GFBS-Adding evaluation for solution#19**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: Apple*

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

**S3-211030 5GFBS-Conclusion for key issue#2**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: Apple*

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

**S3-211071 Conclusions for KI #2**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: Qualcomm Incorporated*

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

**S3-211072 Evaluation on UE behavior on detection of false signature**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: Qualcomm Incorporated*

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

**S3-211073 Evaluation on signing key management**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: Qualcomm Incorporated*

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

**S3-211109 Solution for KI#2 using PKC without requiring tight time sync**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: Philips International B.V.*

**Decision:** The document was **revised to S3-211329**.

**S3-211116 Editorials Solution #24**

*Type: pCR For: (not specified)  
 33.809 v0.13.0  
 Source: Philips International B.V.*

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

**S3-211128 New annex of TR 33.809 – attack taxonomy for 5G UE over radio interfaces**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: CableLabs, NTT Docomo, Philips, Deutsche Telekom AG*

**Decision:** The document was **revised to S3-211235**.

**S3-211131 Discussion for MitM attack**

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

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

**S3-211132 [5GFBS] Identifying MitM attack**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: Samsung*

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

**S3-211154 pCR to 33.809 - addition of new key issue on false detections**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: VODAFONE Group Plc*

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

**S3-211155 pCR to 33.809 - addition of solution to False positive detections**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: VODAFONE Group Plc*

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

**S3-211235 New annex of TR 33.809 – attack taxonomy for 5G UE over radio interfaces**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: CableLabs, NTT Docomo, Philips, Deutsche Telekom AG*

(Replaces S3-211128)

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

**S3-211261 MitM FBS Detection**

*Type: pCR For: Approval  
 33.809 v0.12.1  
 Source: Huawei, HiSilicon, Philips*

(Replaces S3-210975)

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

**S3-211329 Solution for KI#2 using PKC without requiring tight time sync**

*Type: pCR For: Approval  
 33.809 v0.13.0  
 Source: Philips International B.V.*

(Replaces S3-211109)

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

**S3-211345 Draft TR 33.809**

*Type: draft TS For: Approval  
 33.809 v0.14.0  
 Source: Apple*

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

### 2.2 Study on SECAM and SCAS for 3GPP virtualized network products

**S3-210936 Scope of SECAM SCAS**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes some clarification how different components of GVNP impacts the vendor development process and product lifecycle process for the virtualized network product security assurance study

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

**S3-210937 Scope of VNP evaluation**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes some enhancement and clarification for scope of virtualized network product security assurance study.

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

**S3-210938 SECAM Assurance Level**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes to include potential impact to the SECAM assurance level due to virtualization for the virtualized network product security assurance study.

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

**S3-210939 SECAM Vendor Role**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes some clarification on roles in SECAM for virtualized network product security assurance study.

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

**S3-210940 VNP SCAS Instantiation**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes some enhancement and clarification evaluation and SCAS instantiation for the virtualized network product security assurance study.

**Decision:** The document was **revised to S3-211257**.

**S3-210941 GVNP Type 2 hardening unnecessary service or protocol**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes to add details on GVNP Type 2 hardening unnecessary service/protocol aspect due to virtualization for the virtualized network product security assurance study.

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

**S3-210942 GVNP Type 2 hardening unsupported component**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes to add details on GVNP Type 2 hardening unsupported component aspect due to virtualization for the virtualized network product security assurance study.

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

**S3-210943 GVNP Tyype 2 hardening unused function**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes to add details on GVNP Type 2 hardening unused function aspect due to virtualization for the virtualized network product security assurance study.

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

**S3-210944 GVNP Type 2 hardening unused software**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes to add details on GVNP Type 2 hardening unused software aspect due to virtualization for the virtualized network product security assurance study.

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

**S3-210945 Operational Environmental Security Assumptions**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes to include potential impact to the operational environmental security assumption due to virtualization for the virtualized network product security assurance study.

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

**S3-210946 Monitoring**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes to add potential difference in monitoring due to virtualization for the virtualized network product security assurance study.

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

**S3-210947 Dispute Resolution**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes to add potential difference in dispute resolution due to virtualization for the virtualized network product security assurance study.

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

**S3-210948 Operator Acceptance Aspect**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes some enhancement on operator security acceptance aspect for virtualized network product security assurance study.

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

**S3-210949 Discussion on GVNP Type 1 assets protection**

*Type: discussion For: Endorsement  
 Source: Futurewei Technologies*

**Abstract:**

This contribution discusses the protection of assets in GVNP type 1 due to virtualization for the virtualized network product security assurance study.

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

**S3-210950 GVNP Type 1 assets protection**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

**Abstract:**

This contribution proposes to add the following editor’s note on the protection of GVNP Type 1assets for the virtualized network product security assurance study.

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

**S3-211013 Clarifying the GVNP lifecycle in clause 5.2.5.5.7.1**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: China Mobile*

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

**S3-211014 Modifying test case in clause 5.2.5.5.7.2**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: China Mobile*

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

**S3-211015 Clarifying for the security requirements and test cases in clause 5.2.5.7.7.2 and 5.2.5.7.7.3**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: China Mobile*

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

**S3-211016 Adding vendor development and product lifecycle processes and test laboratory accreditation into Clause 6**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: China Mobile*

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

**S3-211017 proposal for way forward**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: China Mobile*

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

**S3-211257 VNP SCAS Instantiation**

*Type: pCR For: Approval  
 33.818 v0.10.0  
 Source: Futurewei Technologies*

(Replaces S3-210940)

**Abstract:**

This contribution proposes some enhancement and clarification evaluation and SCAS instantiation for the virtualized network product security assurance study.

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

**S3-211325 TR 33.818 v0.11.0**

*Type: draft TR For: Approval  
 33.818 v0.11.0  
 Source: China Mobile Com. Corporation*

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

### 2.3 Study on User Plane Integrity Protection

**S3-210899 New Solution for Interworking from 5GS to EPS**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211299**.

**S3-210900 Conclusion for Key Issue #7**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Huawei, HiSilicon*

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

**S3-211150 Update on Solution #21: Interworking handover from EPS to 5GS**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211189**.

**S3-211151 Update on Solution #22: S1 handover**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211190**.

**S3-211152 Update on Solution #23: X2 handover**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

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

**S3-211153 Update on Solution #24: Interworking handover from 5GS to EPS**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211191**.

**S3-211167 Update of key issue #7 with X2 handover and S1 handover**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

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

**S3-211168 New solution for source eNB pre-configured with neighbour target eNB’s support of UP IP**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211192**.

**S3-211169 Use of criticality information**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

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

**S3-211186 TR 33.853 v1.5.0**

*Type: draft TR For: Approval  
 33.853 v1.5.0  
 Source: VODAFONE Group Plc*

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

**S3-211189 Update on Solution #21: Interworking handover from EPS to 5GS**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

(Replaces S3-211150)

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

**S3-211190 Update on Solution #22: S1 handover**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

(Replaces S3-211151)

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

**S3-211191 Update on Solution #24: Interworking handover from 5GS to EPS**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

(Replaces S3-211153)

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

**S3-211192 New solution for source eNB pre-configured with neighbour target eNB’s support of UP IP**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Ericsson*

(Replaces S3-211168)

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

**S3-211299 New Solution for Interworking from 5GS to EPS**

*Type: pCR For: Approval  
 33.853 v1.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210899)

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

### 2.4 Study on Security Impacts of Virtualisation

**S3-210829 Administration of the virtualisation fabric**

*Type: pCR For: (not specified)  
 33.848 v0.6.0  
 Source: NCSC*

**Decision:** The document was **revised to S3-211340**.

**S3-211340 Administration of the virtualisation fabric**

*Type: pCR For: -  
 33.848 v0.6.0  
 Source: NCSC*

(Replaces S3-210829)

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

**S3-210839 Update on Ki#27 Image Snapshot and VNF Mobility.**

*Type: pCR For: Approval  
 33.848 v0.6.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This pCR adds one more level of detail to Ki#27 and proposes specific points, which should be addressed during the study and resolution of this Key Issue.

**Decision:** The document was **revised to S3-211341**.

**S3-211341 Update on Ki#27 Image Snapshot and VNF Mobility.**

*Type: pCR For: Approval  
 33.848 v0.6.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-210839)

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

**S3-211339 TR 33.848 v0.7.0**

*Type: draft TR For: Approval  
 33.848 v0.7.0  
 Source: BT plc*

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

### 2.5 Study on authentication enhancements in 5GS

**S3-210818 Reply to LS on Resynchronisations**

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

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

**S3-210841 Editor note removal on SQNms protection by concealment with SUPI with f5**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211181**.

**S3-210842 Update to mapping table**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210843 Assuring SUCI generation by legitimiate SUPI owner using KSUCI**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211182**.

**S3-210844 Update to Solution 4.5 AUTS SQNMS solution for 5GS to add a note**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210845 Evaluation of solution 2.3 Unified authentication response message by UE**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211177**.

**S3-210846 Evaluation of solution 2.2 Encryption of authentication failure message types by UE with new keys derived from K\_AUSF**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210847 Evaluation of solution 2.4 MAC-S based solution**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211178**.

**S3-210848 MAC, SYNCH failure cause concealment solution**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211183**.

**S3-210849 Key issue risk assessment**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210851 TR 33.846: update of solution #4.7**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: THALES*

**Abstract:**

Update of solution #4.7 to extend to SUCI computation in the USIM.

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

**S3-210852 TR 33.846: evaluation of solution #3.1**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: THALES*

**Abstract:**

Evaluation of solution #3.1.

**Decision:** The document was **revised to S3-211210**.

**S3-210853 TR 33.846: impacts of solutions**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: THALES*

**Abstract:**

Impacts of solutions: update of the comparison table.

**Decision:** The document was **revised to S3-211211**.

**S3-210854 TR 33.846: conclusion for KI #4.1**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: THALES*

**Abstract:**

Conclusion for KI #4.1

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

**S3-210875 Update comparison table for solution 2.7 and 6.4**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: ZTE Corporation*

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

**S3-210876 EN resolution on null scheme for solution 2.7**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-211213**.

**S3-210877 Text editing update on solution 2.7**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: ZTE Corporation*

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

**S3-210878 Solution of mitigating the SUPI guessing attacks**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: ZTE Corporation*

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

**S3-210879 Resolve the EN in Sol#4.6**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: ZTE Corporation*

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

**S3-210880 Update mapping table in clause 6.0**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: ZTE Corporation*

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

**S3-210914 New solution to mitigate the SUPI guessing attack**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211304**.

**S3-210915 Update for solution #3.1**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211305**.

**S3-210992 SUCI Linkability attack**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: NEC*

**Decision:** The document was **revised to S3-211236**.

**S3-211018 Update key issue #2.2 in TR 33.846**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: China Mobile*

**Decision:** The document was **revised to S3-211049**.

**S3-211019 Solution to Key issue #2.2 in TR 33.846**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: China Mobile*

**Decision:** The document was **revised to S3-211050**.

**S3-211020 Update key issue #3.2 in TR 33.846**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: China Mobile*

**Decision:** The document was **revised to S3-211026**.

**S3-211026 Update key issue #3.2 in TR 33.846**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: China Mobile, ZTE, Huawei*

(Replaces S3-211020)

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

**S3-211049 Update key issue #2.2 in TR 33.846**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: China Mobile*

(Replaces S3-211018)

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

**S3-211050 Solution to Key issue #2.2 in TR 33.846**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: China Mobile*

(Replaces S3-211019)

**Decision:** The document was **revised to S3-211324**.

**S3-211057 Some proposed text for the assessment of attack risk table**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211336**.

**S3-211086 Editorial updates to 33846-0100**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211184**.

**S3-211147 TR 33.846: evaluation of solution #2.2**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: THALES*

**Abstract:**

Evaluation of solution #2.2.

**Decision:** The document was **revised to S3-211208**.

**S3-211148 TR 33.846: conclusion for KI #2.1**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: THALES*

**Abstract:**

Conclusion for Key Issue #2.1

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

**S3-211177 Evaluation of solution 2.3 Unified authentication response message by UE**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-210845)

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

**S3-211178 Evaluation of solution 2.4 MAC-S based solution**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-210847)

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

**S3-211180 TR 33.846: evaluation of solution #2.2**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: THALES*

**Abstract:**

Evaluation of solution #2.2.

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

**S3-211181 Editor note removal on SQNms protection by concealment with SUPI with f5**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell, Thales*

(Replaces S3-210841)

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

**S3-211182 Assuring SUCI generation by legitimiate SUPI owner using KSUCI**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-210843)

**Abstract:**

Revision draft version 6 of S3-210843

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

**S3-211183 MAC, SYNCH failure cause concealment solution**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-210848)

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

**S3-211184 Editorial updates to 33846-0100**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell,ZTE*

(Replaces S3-211086)

**Abstract:**

Merger of S3-211086 and S3-210877

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

**S3-211208 TR 33.846: evaluation of solution #2.2**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: THALES, Nokia, Nokia Shanghai Bell*

(Replaces S3-211147)

**Abstract:**

Evaluation of solution #2.2.

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

**S3-211210 TR 33.846: evaluation of solution #3.1**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: THALES*

(Replaces S3-210852)

**Abstract:**

Evaluation of solution #3.1.

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

**S3-211211 TR 33.846: impacts of solutions**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: THALES, ZTE*

(Replaces S3-210853)

**Abstract:**

Impacts of solutions: update of the comparison table.

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

**S3-211213 EN resolution on null scheme for solution 2.7**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: ZTE Corporation*

(Replaces S3-210876)

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

**S3-211236 SUCI Linkability attack**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: NEC*

(Replaces S3-210992)

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

**S3-211287 Draft TR 33.846 v0.11.0 Study on authentication enhancements in the 5G System (5GS)**

*Type: draft TR For: Approval  
 33.846 v0.11.0  
 Source: Ericsson Hungary Ltd*

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

**S3-211304 New solution to mitigate the SUPI guessing attack**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210914)

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

**S3-211305 Update for solution #3.1**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210915)

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

**S3-211324 Solution to Key issue #2.2 in TR 33.846**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: China Mobile*

(Replaces S3-211050)

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

**S3-211336 Some proposed text for the assessment of attack risk table**

*Type: pCR For: Approval  
 33.846 v0.10.0  
 Source: Qualcomm Incorporated, Nokia, Nokia Shanghai Bell*

(Replaces S3-211057)

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

### 2.6 Study on storage and transport of 5GC security parameters for ARPF authentication

### 2.7 Study on security aspects of Unmanned Aerial Systems

**S3-210831 TR 33.854 Solution#3 evaluation**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

**Abstract:**

Providing an update for API based UUAA and adding evaluation for solution#3

**Decision:** The document was **revised to S3-211251**.

**S3-210832 TR 33.854 Solution#5 evaluation**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

**Abstract:**

update list of KIs addressed, clear EN on USS/UTM authentication, add an evaluation

**Decision:** The document was **revised to S3-211252**.

**S3-210833 TR 33.854 Solution#12 evaluation**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

**Abstract:**

updates list of KIs addressed, adds an evaluation

**Decision:** The document was **revised to S3-211254**.

**S3-210834 TR 33.854 Update for KI#4**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

**Abstract:**

updates KI#4 to cover the location tracking authorization aspects

**Decision:** The document was **revised to S3-211255**.

**S3-210835 TR 33.854 Update for KI#6**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd., Lenovo, Motorola Mobility*

**Abstract:**

update of KI#6 requirement similar to KI#7 (C2) but for UAV-USS/UTM communication

**Decision:** The document was **revised to S3-211256**.

**S3-210836 TR 33.854 Conclusion for KI#4**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

**Abstract:**

proposes a way forward for KI#4

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

**S3-210837 TR 33.854 Conclusion for KI#1**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

**Abstract:**

proposes a way forward for KI#1

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

**S3-210838 TR 33.854 Conclusion for KI#2**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

**Abstract:**

propose a way forward for KI#2

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

**S3-210896 New solution to prevent malicious revocation**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210898 New solution to provide consisitent PDU session security for C2**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210976 add evaluation to solution 1**

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

**Decision:** The document was **revised to S3-211262**.

**S3-210977 add evaluation to solution 11**

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

**Decision:** The document was **revised to S3-211263**.

**S3-211053 Adding the revocation functionality to solution #14**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211331**.

**S3-211054 Adding the revocation functionality to solution #13**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211333**.

**S3-211115 UAS: Update to solution #2**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211212**.

**S3-211122 Update to Solution#7**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

This pCR updates Solution 7 in TR 33.854.

**Decision:** The document was **revised to S3-211249**.

**S3-211124 Resolving EN on UAVC Change**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

This pCR resolves an EN on replacing UAVC and updates Solution 15 in TR 33.854.

**Decision:** The document was **revised to S3-211250**.

**S3-211125 Update to Solution#15**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

This pCR updates Solution 15 in TR 33.854.

**Decision:** The document was **revised to S3-211253**.

**S3-211212 UAS: Update to solution #2**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Ericsson*

(Replaces S3-211115)

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

**S3-211249 Update to Solution#7**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Lenovo, Motorola Mobility*

(Replaces S3-211122)

**Abstract:**

This pCR updates Solution 7 in TR 33.854.

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

**S3-211250 Resolving EN on UAVC Change**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Lenovo, Motorola Mobility*

(Replaces S3-211124)

**Abstract:**

This pCR resolves an EN on replacing UAVC and updates Solution 15 in TR 33.854.

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

**S3-211251 TR 33.854 Solution#3 evaluation**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-210831)

**Abstract:**

Providing an update for API based UUAA and adding evaluation for solution#3

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

**S3-211252 TR 33.854 Solution#5 evaluation**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-210832)

**Abstract:**

update list of KIs addressed, clear EN on USS/UTM authentication, add an evaluation

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

**S3-211253 Update to Solution#15**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Lenovo, Motorola Mobility*

(Replaces S3-211125)

**Abstract:**

This pCR updates Solution 15 in TR 33.854.

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

**S3-211254 TR 33.854 Solution#12 evaluation**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-210833)

**Abstract:**

updates list of KIs addressed, adds an evaluation

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

**S3-211255 TR 33.854 Update for KI#4**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd.*

(Replaces S3-210834)

**Abstract:**

updates KI#4 to cover the location tracking authorization aspects

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

**S3-211256 TR 33.854 Update for KI#6**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: InterDigital, Europe, Ltd., Lenovo, Motorola Mobility*

(Replaces S3-210835)

**Abstract:**

update of KI#6 requirement similar to KI#7 (C2) but for UAV-USS/UTM communication

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

**S3-211262 add evaluation to solution 1**

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

(Replaces S3-210976)

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

**S3-211263 add evaluation to solution 11**

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

(Replaces S3-210977)

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

**S3-211331 Adding the revocation functionality to solution #14**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211053)

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

**S3-211333 Adding the revocation functionality to solution #13**

*Type: pCR For: Approval  
 33.854 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211054)

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

**S3-211346 Draft TR 33.854**

*Type: draft TR For: Approval  
 33.854 v0.5.0  
 Source: Qualcomm*

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

### 2.8 Study on Security Aspects of Enhancement of Support for Edge Computing in 5GC

**S3-210816 Reply LS on IP address to GPSI translation**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2009339*

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

**S3-210855 Discussion paper on GPSI translation to Temperary UE id**

*Type: discussion For: Endorsement  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210856 Reply LS on GPSI translation for Edge AS**

*Type: LS out For: Approval  
 to SA6, SA2  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210868 Add evaluation to solution#5**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: CATT*

**Decision:** The document was **revised to S3-211268**.

**S3-210869 Add evaluation to solution#6**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: CATT*

**Decision:** The document was **revised to S3-211269**.

**S3-210870 Modification on solution #6**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: CATT*

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

**S3-210871 Remove EN in solution#5**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: CATT*

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

**S3-210881 Resolving the EN of solution #7**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: ZTE Corporation*

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

**S3-210882 Resolving the EN of solution #17**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: ZTE Corporation*

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

**S3-210883 Conclusion for key issue 9**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: ZTE Corporation*

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

**S3-210930 Address Editor's Note in solution 11**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

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

**S3-210931 Address Editor's Note in solution 8**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

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

**S3-210932 Evaluation of solution #14**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

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

**S3-210952 New Solution for Authentication and Authorization between EEC and ECS/EES**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-211326**.

**S3-210955 Evaluation of solution#9**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-211327**.

**S3-210969 EC: Conclusion for KI #9**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-211318**.

**S3-210970 EC: Update Solution #13 to include CP option**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

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

**S3-210971 EC: Discussion for the authorization during EDN relocation**

*Type: pCR For: Discussion  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

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

**S3-210972 EC: Update of solution #22**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-211319**.

**S3-210973 EC: New solution for the authorization during EDN relocation**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-211320**.

**S3-210974 EC: Conclusion for Key issue #5**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

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

**S3-210978 Proposal for conclusion for Key Issue 1,2,4,6**

*Type: pCR For: (not specified)  
 33.839 v0.4.0  
 Source: Intel Deutschland GmbH*

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

**S3-210979 Updates to solution 4**

*Type: pCR For: (not specified)  
 33.839 v0.4.0  
 Source: Intel Deutschland GmbH*

**Decision:** The document was **revised to S3-211281**.

**S3-210980 Updates to solution 12**

*Type: pCR For: (not specified)  
 33.839 v0.4.0  
 Source: Intel Deutschland GmbH*

**Decision:** The document was **revised to S3-211282**.

**S3-211023 Resolution of Editor’s Notes in Solution#7**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

Resolution of Editor’s Notes in Solution#7.

**Decision:** The document was **revised to S3-211232**.

**S3-211035 MEC-New key issue on EEC ID privacy protection**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Apple*

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

**S3-211036 MEC-New solution for key issue#10**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Apple*

**Decision:** The document was **revised to S3-211176**.

**S3-211037 MEC-Modification on key issue#4**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Apple*

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

**S3-211058 Discussion on the LS on providing UE identity based on IP address**

*Type: discussion For: Endorsement  
 Source: Qualcomm Incorporated*

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

**S3-211059 Reply LS on IP address to GPSI translation**

*Type: LS out For: Approval  
 to SA2, cc SA6  
 Source: Qualcomm Incorporated*

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

**S3-211060 Using TLS with AKMA to protect EDGE-1 and EDGE-4**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211337**.

**S3-211110 Secondary authentication for Session Breakout**

*Type: discussion For: Discussion  
 Source: Ericsson*

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

**S3-211111 [Draft] LS on Secondary authentication for Session Breakout**

*Type: LS out For: Approval  
 to SA2, cc CT1, CT3  
 Source: Ericsson*

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

**S3-211114 EC: Update to solution #17**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211222**.

**S3-211172 Reply LS on IP address to GPSI translation**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2101307*

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

**S3-211176 MEC-New solution for key issue#10**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Apple*

(Replaces S3-211036)

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

**S3-211222 EC: Update to solution #17**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Ericsson*

(Replaces S3-211114)

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

**S3-211232 Resolution of Editor’s Notes in Solution#7**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Lenovo, Motorola Mobility*

(Replaces S3-211023)

**Abstract:**

Resolution of Editor’s Notes in Solution#7.

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

**S3-211268 Add evaluation to solution#5**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: CATT*

(Replaces S3-210868)

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

**S3-211269 Add evaluation to solution#6**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: CATT*

(Replaces S3-210869)

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

**S3-211281 Updates to solution 4**

*Type: pCR For: (not specified)  
 33.839 v0.4.0  
 Source: Intel Deutschland GmbH*

(Replaces S3-210979)

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

**S3-211282 Updates to solution 12**

*Type: pCR For: (not specified)  
 33.839 v0.4.0  
 Source: Intel Deutschland GmbH*

(Replaces S3-210980)

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

**S3-211318 EC: Conclusion for KI #9**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon, ZTE*

(Replaces S3-210969)

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

**S3-211319 EC: Update of solution #22**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

(Replaces S3-210972)

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

**S3-211320 EC: New solution for the authorization during EDN relocation**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

(Replaces S3-210973)

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

**S3-211321 TR 33.839 v0.5.0**

*Type: draft TR For: Approval  
 33.839 v0.5.0  
 Source: Huawei, Hisilicon*

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

**S3-211326 New Solution for Authentication and Authorization between EEC and ECS/EES**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

(Replaces S3-210952)

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

**S3-211327 Evaluation of solution#9**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Huawei, Hisilicon*

(Replaces S3-210955)

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

**S3-211337 Using TLS with AKMA to protect EDGE-1 and EDGE-4**

*Type: pCR For: Approval  
 33.839 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211060)

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

### 2.9 Study on Security Aspects of Enhancement for Proximity Based Services in 5GS

**S3-210819 LS on Security Requirements for Sidelink/PC5 Relays**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: S2-2004750*

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

**S3-210820 New Solution for privacy with Layer-2 based UE-to-UE Relay and Adaptation Layer**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: InterDigital, Inc.*

**Abstract:**

This pCR provides a new solution for privacy with Adaptation Layer and Layer-2 based UE-to-UE Relay.

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

**S3-210821 Privacy considerations for Adaptation Layer and Layer-2 based UE-to-UE Relay**

*Type: discussion For: Discussion  
 33.847 v..  
 Source: InterDigital, Inc.*

**Abstract:**

This discussion Paper provides privacy considerations for Adaptation Layer and Layer-2 based UE-to-UE Relay.

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

**S3-210823 DRAFT LS on Layer-2 based UE-to-UE Relay utilizing Adaptation Layer**

*Type: LS out For: Agreement  
 to RAN2, SA2  
 Source: InterDigital, Inc.*

**Abstract:**

This contribution proposes a DRAFT LS on Layer-2 based UE-to-UE Relay utilizing Adaptation Layer.

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

**S3-210824 Solution for privacy handling with Layer-3 based UE-to-UE Relay**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: InterDigital, Inc.*

**Abstract:**

This contribution proposes a new solution to address the KI #8, Privacy of information over the UE-to-UE Relay.

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

**S3-210825 TR 33.847 Update for solution #10**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: InterDigital, Inc.*

**Abstract:**

This pCR proposes updates for solution #10.

**Decision:** The document was **revised to S3-211240**.

**S3-210826 TR 33.847 Update for solution #24**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: InterDigital, Inc.*

**Abstract:**

This contribution proposes an update for solution #24.

**Decision:** The document was **revised to S3-211242**.

**S3-210827 TR 33.847 Update for solution #25**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: InterDigital, Inc.*

**Abstract:**

This contribution proposes an update for solution #25.

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

**S3-210828 Updated Solution #22: Representation of identities during broadcast**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: KPN N.V.*

**Decision:** The document was **revised to S3-211179**.

**S3-210830 Updated Solution #23: Initial key with validity time**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: KPN N.V.*

**Decision:** The document was **revised to S3-211185**.

**S3-210850 TR 33.847: Solution #18**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: THALES*

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

**S3-210865 EN resolution for KI#1**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: LG Electronics Inc.*

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

**S3-210866 Update for Sol#13**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: LG Electronics Inc.*

**Decision:** The document was **revised to S3-211174**.

**S3-210867 Evaluation for Sol#13**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: LG Electronics Inc.*

**Decision:** The document was **revised to S3-211175**.

**S3-210874 ProSE Direct Discovery Clarification in Out-of-Coverage Scenarios**

*Type: pCR For: (not specified)  
 33.847 v0.4.0  
 Source: MITRE Corporation*

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

**S3-210884 Removing ENs of Solution #3**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-211202**.

**S3-210885 Removing ENs of Solution #4**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-211203**.

**S3-210891 Update and add evaluation to Solution #7 in TR 33.847**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211295**.

**S3-210892 Address Editor's Note in Solution #27**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211296**.

**S3-210893 Address Editor's Note in Solution #28**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211297**.

**S3-210894 Update details and add evaluation to Solution #26 in TR 33.847**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210895 Propose to resolve EN in KI#16**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210897 new solution for PC5 one-to-one rekeying**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211298**.

**S3-210921 Update solution#11 to meet privacy requirement**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210922 Add evaluation to solution#11**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211309**.

**S3-210923 Address Editors Note in evaluation of solution #5**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210924 Add conclusion to KI#10**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210925 Add evaluaition to solution#29**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211310**.

**S3-210926 Add evaluaition to solution#30**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211311**.

**S3-210929 Address the remaining ENs in solution 15**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211312**.

**S3-210994 pCR to TR33.847- Update Solution#29**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: CATT*

**Decision:** The document was **revised to S3-211272**.

**S3-210995 pCR to TR33.847- Update Solution#30**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: CATT*

**Decision:** The document was **revised to S3-211273**.

**S3-211032 ProSe-enhancement on discovery procedure**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Apple*

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

**S3-211033 ProSe-Security solution during reselection via UE-to-UE relay**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Apple*

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

**S3-211034 ProSe-Editorial in key issue#11**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Apple*

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

**S3-211048 Security policy consistency during UE-to-UE relay path switch**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Apple Computer Trading Co. Ltd*

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

**S3-211063 Authorization of remote UE in L3 U2N relay**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211291**.

**S3-211064 New Key Issue on security policy handling for 5G Prose services**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Qualcomm Incorporated, Huawei, Hisilicon, Ericsson*

(Replaces S3-210482)

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

**S3-211065 EN resolution for solution #18**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Qualcomm Incorporated*

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

**S3-211066 EN resolution and evaluation for solution #20**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211292**.

**S3-211067 Update the evaluation for solution #3**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211289**.

**S3-211068 Update the evaluation for solution #4**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211290**.

**S3-211087 ProSe: Update to solution #5**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211328**.

**S3-211088 ProSe: Retrieve Discovery keys for UE-to-network relays**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211229**.

**S3-211089 ProSe: Update to solution #21**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211230**.

**S3-211090 ProSe: Update to solution #6**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Ericsson*

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

**S3-211101 ProSe: Updating Key Issue #1**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Xiaomi Technology*

**Abstract:**

This pCR is proposed to update Key Issue #1 in current version of TR 33.847.

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

**S3-211102 ProSe: Updating Key Issue #9**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Xiaomi Technology*

**Abstract:**

This pCR proposes to update the issue description, threat analysis and potential requirements in key issue #9.

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

**S3-211103 ProSe: Updating Key Issue #12**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Xiaomi Technology*

**Abstract:**

This pCR proposes to update Key Issue #12 in current version of TR 33.847.

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

**S3-211104 ProSe: Updating Key Issue #16**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Xiaomi Technology*

**Abstract:**

This pCR proposes to update Key Issue #16 in current version of TR 33.847.

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

**S3-211105 ProSe: Adding a New Key Issue on Security Policies for PC5 Direct Link**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Xiaomi Technology*

**Abstract:**

This pCR proposes to add a new key issue in TR 33.847 about security policy handling for 5G Prose one-to-one Direct Communication.

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

**S3-211106 ProSe: Adding a New Key Issue on Security Policy with UE-to-Network Relay**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Xiaomi Technology*

**Abstract:**

This pCR proposes to add a new key issue in TR 33.847 about security policy handling in support of Layer-3 UE-to-Network Relay.

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

**S3-211107 ProSe: Adding a New Key Issue on Security Policy with UE-to-UE Relay**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Xiaomi Technology*

**Abstract:**

This pCR proposes to add a new key issue in TR 33.847 about security policy handling in support of Layer-3 UE-to-UE Relay.

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

**S3-211108 Reply LS to LS on Security Requirements for Sidelink/PC5 Relays**

*Type: LS out For: Approval  
 to SA2, cc RAN2, RAN3  
 Source: Xiaomi Technology*

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

**S3-211129 [ProSe] Evaluation for solution#1**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-211198**.

**S3-211130 [ProSe] Resolving ENs in solution#1**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-211199**.

**S3-211149 Resolving editor’s note in solution #32**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Philips International B.V.*

**Decision:** The document was **revised to S3-211258**.

**S3-211174 Update for Sol#13**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: LG Electronics Inc.*

(Replaces S3-210866)

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

**S3-211175 Evaluation for Sol#13**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: LG Electronics Inc.*

(Replaces S3-210867)

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

**S3-211179 Updated Solution #22: Representation of identities during broadcast**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: KPN N.V., MITRE*

(Replaces S3-210828)

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

**S3-211185 Updated Solution #23: Initial key with validity time**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: TNO*

(Replaces S3-210830)

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

**S3-211198 [ProSe] Evaluation for solution#1**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Samsung*

(Replaces S3-211129)

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

**S3-211199 [ProSe] Resolving ENs in solution#1**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Samsung*

(Replaces S3-211130)

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

**S3-211202 Removing ENs of Solution #3**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: ZTE Corporation*

(Replaces S3-210884)

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

**S3-211203 Removing ENs of Solution #4**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: ZTE Corporation*

(Replaces S3-210885)

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

**S3-211229 ProSe: Retrieve Discovery keys for UE-to-network relays**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Ericsson*

(Replaces S3-211088)

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

**S3-211230 ProSe: Update to solution #21**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Ericsson*

(Replaces S3-211089)

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

**S3-211240 TR 33.847 Update for solution #10**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: InterDigital, Inc.*

(Replaces S3-210825)

**Abstract:**

This contribution addresses ENs in Solution 10. It is based on revisions reflected in S3-210825-r3 and approved during SA3#102Bis-e.

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

**S3-211242 TR 33.847 Update for solution #24**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: InterDigital, Inc.*

(Replaces S3-210826)

**Abstract:**

This contribution addresses ENs in Solution #24. It based on revision S3-210826-r2 approved during SA3#102Bis-e.

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

**S3-211258 Resolving editor’s note in solution #32**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Philips International B.V.*

(Replaces S3-211149)

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

**S3-211272 pCR to TR33.847- Update Solution#29**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: CATT*

(Replaces S3-210994)

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

**S3-211273 pCR to TR33.847- Update Solution#30**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: CATT*

(Replaces S3-210995)

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

**S3-211274 Draft TR 33.847 v0.5.0 Study on Security Aspects of Enhancement for Proximity Based Services in 5GS**

*Type: draft TR For: Approval  
 33.847 v0.5.0  
 Source: CATT*

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

**S3-211289 Update the evaluation for solution #3**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211067)

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

**S3-211290 Update the evaluation for solution #4**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211068)

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

**S3-211291 Authorization of remote UE in L3 U2N relay**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211063)

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

**S3-211292 EN resolution and evaluation for solution #20**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211066)

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

**S3-211295 Update and add evaluation to Solution #7 in TR 33.847**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210891)

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

**S3-211296 Address Editor's Note in Solution #27**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210892)

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

**S3-211297 Address Editor's Note in Solution #28**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210893)

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

**S3-211298 new solution for PC5 one-to-one rekeying**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210897)

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

**S3-211309 Add evaluation to solution#11**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210922)

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

**S3-211310 Add evaluaition to solution#29**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210925)

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

**S3-211311 Add evaluaition to solution#30**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210926)

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

**S3-211312 Address the remaining ENs in solution 15**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210929)

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

**S3-211328 ProSe: Update to solution #5**

*Type: pCR For: Approval  
 33.847 v0.4.0  
 Source: Ericsson, Huawei, HiSilicon*

(Replaces S3-211087)

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

### 2.10 Study on security for enhanced support of Industrial IoT

**S3-210916 Conclusion on key issue 1**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211306**.

**S3-210998 Draft CR 33.501 updates to TSC Annex L**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210999 Requirement and solution on multiple working domains**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211226**.

**S3-211000 KI4 update on NEF-AF**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211228**.

**S3-211001 Solution update on NEF-AF**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211002 Annex on asmmetric delay attacks**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell, Deutsche Telekom*

**Decision:** The document was **revised to S3-211227**.

**S3-211003 Annex on Security considerations for integration with TSN**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211079 IIOT: Resolve EN in solution #2**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Ericsson*

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

**S3-211080 IIOT: Update to KI#3**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211243**.

**S3-211081 IIOT: Conclusion on KI#4**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211246**.

**S3-211082 IIOT: Conclusion on KI#1**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Ericsson*

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

**S3-211112 IIoT: Update to solution #3**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211215**.

**S3-211113 IIoT: Update to and conclusion on KI #2**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211216**.

**S3-211215 IIoT: Update to solution #3**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Ericsson*

(Replaces S3-211112)

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

**S3-211216 IIoT: Update to and conclusion on KI #2**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Ericsson, Nokia, Nokia Shanghai Bell*

(Replaces S3-211113)

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

**S3-211226 Requirement and solution on multiple working domains**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-210999)

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

**S3-211227 Annex on asmmetric delay attacks**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell, Deutsche Telekom*

(Replaces S3-211002)

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

**S3-211228 KI4 update on NEF-AF**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211000)

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

**S3-211243 IIOT: Update to KI#3**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Ericsson*

(Replaces S3-211080)

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

**S3-211246 IIOT: Conclusion on KI#4**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Ericsson, Nokia, Nokia Shanghai Bell*

(Replaces S3-211081)

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

**S3-211306 Conclusion on key issue 1**

*Type: pCR For: Approval  
 33.851 v0.4.0  
 Source: Huawei, Hisilicon, Nokia, Nokia Shanghai Bell, Ericsson*

(Replaces S3-210916)

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

**S3-211343 Draft TR 33.851**

*Type: draft TR For: Approval  
 33.851 v0.5.0  
 Source: Nokia*

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

### 2.11 Study on Security Aspects of Enhancements for 5G Multicast-Broadcast Services

**S3-210814 Reply LS on 5MBS progress and issues to address**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R2-2102480*

**Decision:** The document was **replied to in S3-211313**.

**S3-210857 Secure framewrok for MBS key distribution**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211278**.

**S3-210886 Update Solution#8**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: ZTE Corporation*

**Decision:** The document was **revised to S3-211188**.

**S3-210917 Conclusion on key issue 4**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210918 New solution to update the MBS keys**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211307**.

**S3-210919 Resolving the Editor's Notes in solution 2**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211308**.

**S3-210920 Updating and resolving the Editor's Notes in solution 8**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210933 Add evaluation to solution 1**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: CATT*

**Decision:** The document was **revised to S3-211270**.

**S3-210934 Add evaluation to solution 2**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: CATT*

**Decision:** The document was **revised to S3-211271**.

**S3-210935 Add evaluation to solution 8**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: CATT*

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

**S3-210963 MBS: Updates to solution #4**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Huawei, Hisilicon*

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

**S3-210964 MBS: Evaluation to solution #4**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-211317**.

**S3-210965 MBS: Conclusion to key issue #1**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Huawei, Hisilicon*

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

**S3-211069 EN resolution of Solution #1**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Qualcomm Incorporated*

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

**S3-211070 5G MBS traffic protection at service-layer**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211294**.

**S3-211120 Modification to address FFS about key update after re-authentication in Solution 2**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Philips International B.V.*

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

**S3-211127 Improve description of key update in Solution 2 by refering to Solution 9**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Philips International B.V.*

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

**S3-211144 [Solution] Key generation and distribution mechanism for MBS**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-211197**.

**S3-211188 Update Solution#8**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: ZTE Corporation*

(Replaces S3-210886)

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

**S3-211197 [Solution] Key generation and distribution mechanism for MBS**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Samsung*

(Replaces S3-211144)

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

**S3-211270 Add evaluation to solution 1**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: CATT*

(Replaces S3-210933)

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

**S3-211271 Add evaluation to solution 2**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: CATT*

(Replaces S3-210934)

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

**S3-211278 Secure framewrok for MBS key distribution**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-210857)

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

**S3-211293 Draft TR 33.850**

*Type: draft TR For: (not specified)  
 33.850 v0.5.0  
 Source: Huawei, HiSilicon*

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

**S3-211294 5G MBS traffic protection at service-layer**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211070)

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

**S3-211307 New solution to update the MBS keys**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210918)

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

**S3-211308 Resolving the Editor's Notes in solution 2**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210919)

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

**S3-211313 Reply LS on 5MBS progress and issues to address**

*Type: LS out For: (not specified)  
 to RAN2, cc SA2, SA4, RAN3  
 Source: Huawei, HiSilicon*

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

**S3-211317 MBS: Evaluation to solution #4**

*Type: pCR For: Approval  
 33.850 v0.4.0  
 Source: Huawei, Hisilicon*

(Replaces S3-210964)

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

### 2.12 Study on enhanced security support for Non-Public Networks

**S3-210840 Resolving UE ID privacy and format EN in solution 16**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Alibaba Group*

**Decision:** The document was **revised to S3-211187**.

**S3-210887 New solution on control plane based provisioning - PS to AUSF**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: ZTE Corporation*

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

**S3-210888 New solution on control plane based provisioning - PS to UDM**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: ZTE Corporation*

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

**S3-210906 New Solution for Security for Provisioning of SNPN Credentials without Initial Credential**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210907 New Solution for Security for Provisioning of SNPN Credentials with initial credential**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210908 New Solution for Security for Provisioning of PNI-NPN Credentials with initial credential**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210909 Solution Update for Solution #5**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211301**.

**S3-210910 Solution Update for Solution #12**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, HiSilicon*

**Decision:** The document was **revised to S3-211302**.

**S3-210911 Conclusion for Key Issue #1**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, HiSilicon*

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

**S3-210953 Editor notes removal**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-211314**.

**S3-210954 Conclusions on KI#5 Roaming-related security mechanisms for SNPNs**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, Hisilicon*

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

**S3-210956 NPN: New solution to key issue #1**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, Hisilicon*

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

**S3-210984 Updates to solution 14: Add detailed steps**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Intel Deutschland GmbH*

**Decision:** The document was **revised to S3-211283**.

**S3-210985 Updates to solution 14: Removal of Editor’s notes and Evaluation**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Intel Deutschland GmbH*

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

**S3-210991 Proposal for conclusion for Key Issue 4**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Intel Deutschland GmbH*

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

**S3-210996 Proposal for conclusion for Key Issue 4**

*Type: pCR For: (not specified)  
 33.857 v0.4.0  
 Source: Intel Deutschland GmbH*

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

**S3-210997 Proposal for conclusion for Key Issue 4 -rev**

*Type: pCR For: (not specified)  
 33.857 v0.4.0  
 Source: Intel Deutschland GmbH*

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

**S3-211004 Solution to KI#2 (Provisioning of credentials) using AKMA**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Ericsson*

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

**S3-211005 Resolving CP provisioning EN in solution #10**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Ericsson*

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

**S3-211006 Add evaluation to Solution #10 "Secure initial access to an SNPN onboarding network"**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Ericsson*

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

**S3-211007 Updates to solution#10 on PS address**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211206**.

**S3-211008 Solution for privacy protection during initial access**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211009 Solution for providing secure onboarding without client authentication**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211244**.

**S3-211024 A new onboarding solution addressing KI#2**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

A new onboarding solution addressing KI#2.

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

**S3-211025 Update of Solution#6**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

This document provides an update to Solution#6.

**Decision:** The document was **revised to S3-211233**.

**S3-211044 High-level conclusions to KI#4 "Securing initial access for UE onboarding between UE and SNPN"**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Ericsson*

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

**S3-211074 pCR: Further conclusions for KI #1**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Qualcomm Incorporated, CableLabs, Ericsson*

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

**S3-211075 pCR: Conclusions for KI #4**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Qualcomm Incorporated, CableLabs*

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

**S3-211076 pCR: Addressing the EN in solution #4**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211259**.

**S3-211077 pCR: Addressing the SUPI privacy EN in solution #11**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Qualcomm Incorporated*

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

**S3-211078 pCR: Addressing the PS discovery EN in solution #11**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211260**.

**S3-211123 pCR: Conclusion for KI #1 on receiving KAUSF from AAA**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: CableLabs*

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

**S3-211126 pCR: Conclusion for KI #1 on addressing security threat against KAUSF**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: CableLabs*

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

**S3-211187 Resolving UE ID privacy and format EN in solution 16**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Alibaba Group*

(Replaces S3-210840)

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

**S3-211206 Updates to solution#10 on PS address**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Ericsson*

(Replaces S3-211007)

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

**S3-211233 Update of Solution#6**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Lenovo, Motorola Mobility*

(Replaces S3-211025)

**Abstract:**

This document provides an update to Solution#6.

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

**S3-211244 Solution for providing secure onboarding without client authentication**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211009)

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

**S3-211259 pCR: Addressing the EN in solution #4**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211076)

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

**S3-211260 pCR: Addressing the PS discovery EN in solution #11**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211078)

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

**S3-211283 Updates to solution 14: Add detailed steps**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Intel Deutschland GmbH*

(Replaces S3-210984)

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

**S3-211301 Solution Update for Solution #5**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210909)

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

**S3-211302 Solution Update for Solution #12**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, HiSilicon*

(Replaces S3-210910)

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

**S3-211314 Editor notes removal**

*Type: pCR For: Approval  
 33.857 v0.4.0  
 Source: Huawei, Hisilicon*

(Replaces S3-210953)

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

**S3-211347 Draft TR TR 33.857**

*Type: draft TR For: Approval  
 33.857 v0.5.0  
 Source: Ericsson*

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

### 2.13 Study on security aspects of the Disaggregated gNB Architecture

### 2.14 Study on User Consent for 3GPP services

**S3-210813 Reply LS on the user consent for trace reporting**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R2-2010894*

**Decision:** The document was **replied to in S3-211338**.

**S3-210817 LS on propagation of user consent related information during Xn inter-PLMN handover**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R3-204378*

**Decision:** The document was **replied to in S3-211330**.

**S3-210872 Add new key issue for user consent in TR 33.867**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: CATT*

**Decision:** The document was **revised to S3-211267**.

**S3-210873 Add use case mapping part for Key Issue #1 in TR 33.867**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: CATT*

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

**S3-210901 Discussion Paper on Source of User Consent**

*Type: discussion For: Endorsement  
 33.867 v..  
 Source: Huawei, HiSilicon*

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

**S3-210902 Add Text for Source of User Consent for eNA**

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

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

**S3-210903 New Use Case for MEC**

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

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

**S3-210904 Analysis for UC3S**

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

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

**S3-210905 New Solution for UE Related Analytics of NWDAF**

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

**Decision:** The document was **revised to S3-211300**.

**S3-210951 More clarification on scope**

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

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

**S3-210993 New Solution for User Consent for Exposure of information to Edge Applications in Real Time**

*Type: pCR For: (not specified)  
 33.867 v0.3.0  
 Source: China Unicom*

**Decision:** The document was **revised to S3-211342**.

**S3-211342 New Solution for User Consent for Exposure of information to Edge Applications in Real Time**

*Type: pCR For: -  
 33.867 v0.3.0  
 Source: China Unicom*

(Replaces S3-210993)

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

**S3-211011 Reply LS on propagation of user consent related information during Xn inter-PLMN handover**

*Type: LS out For: Approval  
 to RAN3, cc RAN2, SA5  
 Source: Ericsson France S.A.S*

**Decision:** The document was **revised to S3-211330**.

**S3-211061 Discussion on the LS on the user consent for trace reporting**

*Type: discussion For: Endorsement  
 Source: Qualcomm Incorporated*

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

**S3-211062 Reply LS on the user consent for trace reporting**

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

**Decision:** The document was **revised to S3-211338**.

**S3-211083 KI on Processing user consent depending on the regulatory and regional demands**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211084 KI on Modification or revocation of user consent**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211085 KI on User consent for data collection**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211136 Correction to clause 5A.1.1 in TR 33.867**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: Samsung*

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

**S3-211137 Key Issue on user consent for UE data analytics using NWDAF**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: Samsung*

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

**S3-211138 Update on scope of User Consent**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-211193**.

**S3-211193 Update on scope of User Consent**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: Samsung*

(Replaces S3-211138)

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

**S3-211214 KI on Modification or revocation of user consent**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211267 Add new key issue for user consent in TR 33.867**

*Type: pCR For: Approval  
 33.867 v0.3.0  
 Source: CATT*

(Replaces S3-210872)

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

**S3-211300 New Solution for UE Related Analytics of NWDAF**

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

(Replaces S3-210905)

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

**S3-211330 Reply LS on propagation of user consent related information during Xn inter-PLMN handover**

*Type: LS out For: Approval  
 to RAN3, cc RAN2, SA5  
 Source: Ericsson France S.A.S*

(Replaces S3-211011)

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

**S3-211332 TR 33.867**

*Type: draft TR For: (not specified)  
 33.867 v0.4.0  
 Source: Huawei;HiSilicon*

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

**S3-211338 Reply LS on the user consent for trace reporting**

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

(Replaces S3-211062)

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

### 2.15 Study on security aspects of the 5GMSG Service

**S3-211134 Resolving ENs in Solution#1**

*Type: pCR For: Approval  
 33.862 v0.3.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-211200**.

**S3-211200 Resolving ENs in Solution#1**

*Type: pCR For: Approval  
 33.862 v0.3.0  
 Source: Samsung*

(Replaces S3-211134)

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

**S3-211323 draft TR 33.862 0.4.0**

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

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

### 2.16 Study on security aspects of enablers for Network Automation (eNA) for the 5G system (5GS) Phase 2

**S3-210912 Solution Update for Solution #2**

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

**Decision:** The document was **revised to S3-211303**.

**S3-211010 Solution for KI#1.3**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

This document proposes a solution for KI#1.3.

**Decision:** The document was **revised to S3-211234**.

**S3-211012 Solution for KI#1.4**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

This document proposes a solution for KI#1.4.

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

**S3-211021 Removal of solution without any KI**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: China Mobile*

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

**S3-211022 Update for KI#1.3**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

This document proposes an update for KI#1.3.

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

**S3-211038 Update of scope of TR**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211039 KI on Ensuring restrictive transfer of ML models between authorized NWDAFs**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211237**.

**S3-211040 KI on UE data collection protection**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211041 Solution on Privacy preservation of data**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211238**.

**S3-211042 Solution on Abnormal NF behaviour detection**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211239**.

**S3-211043 Update of KI on Security protection of data via Message Framework**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211241**.

**S3-211051 Solution on Providing the Security protection of data via Messaging**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211207**.

**S3-211052 Update on KI on Authorization of consumers for data access via DCCF**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211209**.

**S3-211135 Solution on integrity protection of data transferred between AF and NWDAF**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-211201**.

**S3-211139 Solution on analytics for DoS attack detection**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Samsung*

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

**S3-211140 Solution on analytics for MitM attack detection**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Samsung*

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

**S3-211201 Solution on integrity protection of data transferred between AF and NWDAF**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Samsung*

(Replaces S3-211135)

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

**S3-211207 Solution on Providing the Security protection of data via Messaging**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Ericsson, Lenovo, Motorola Mobility*

(Replaces S3-211051)

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

**S3-211209 Update on KI on Authorization of consumers for data access via DCCF**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Ericsson, Lenovo, Motorola Mobility, Nokia, Nokia Shanghai Bell*

(Replaces S3-211052)

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

**S3-211234 Solution for KI#1.3**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Lenovo, Motorola Mobility*

(Replaces S3-211010)

**Abstract:**

This document proposes a solution for KI#1.3.

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

**S3-211237 KI on Ensuring restrictive transfer of ML models between authorized NWDAFs**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211039)

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

**S3-211238 Solution on Privacy preservation of data**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211041)

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

**S3-211239 Solution on Abnormal NF behaviour detection**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211042)

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

**S3-211241 Update of KI on Security protection of data via Message Framework**

*Type: pCR For: Approval  
 33.866 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211043)

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

**S3-211303 Solution Update for Solution #2**

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

(Replaces S3-210912)

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

**S3-211322 draft TR 33.866 0.4.0**

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

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

### 2.17 Study on the security of AMF re-allocation

**S3-210858 Direct UE connection to Slice AMF**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211279**.

**S3-210889 Definition of Network Slicing Isolation**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: ZTE Corporation*

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

**S3-210890 New key issue on Network Slicing Isolation**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: ZTE Corporation*

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

**S3-210957 AMFReal: Evaluation to solution #1**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-211315**.

**S3-210958 AMFReal: Evaluation to solution #2**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Huawei, Hisilicon*

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

**S3-210959 AMFReal: Updates to solution #3**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Huawei, Hisilicon*

**Decision:** The document was **revised to S3-211316**.

**S3-210960 AMFReal: Evaluation to solution #4**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Huawei, Hisilicon*

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

**S3-210961 AMFReal: Evaluation to solution #5**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Huawei, Hisilicon*

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

**S3-210962 AMFReal: Evaluation to solution #6**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Huawei, Hisilicon*

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

**S3-211055 Addressing the ENs on ngKSI in solution #1**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211334**.

**S3-211056 Addressing the EN on determining whether there is an AMF re-allocation in solution #1**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Qualcomm Incorporated*

**Decision:** The document was **revised to S3-211335**.

**S3-211091 AMF reallocation: Update to solution #2**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211285**.

**S3-211092 AMF re-allocation: Definition of isolation**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Ericsson*

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

**S3-211093 AMF re-allocation: New solution with reroute of Registration Request and protected security context via RAN**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211286**.

**S3-211094 AMF re-allocation: Notes from offline teleconference**

*Type: discussion For: Information  
 33.864 v..  
 Source: Ericsson*

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

**S3-211095 AMF re-allocation: Update of the assumptions**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Ericsson*

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

**S3-211117 Update to Solution#4**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

This pCR proposes to update solution#4 in TR 33.864

**Decision:** The document was **revised to S3-211245**.

**S3-211119 Update to Solution#6**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

This pCR proposes to update solution#6 in TR 33.864

**Decision:** The document was **revised to S3-211247**.

**S3-211121 Solution to enable Reallocated AMF to serve the UE**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Lenovo, Motorola Mobility*

**Abstract:**

This pCR proposes a solution to address KI#1 in TR 33.864

**Decision:** The document was **revised to S3-211248**.

**S3-211133 New key issue for Restricted Access in AMF re-allocation**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Samsung*

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

**S3-211141 Removal of Editor’s Note (1 and 5) in Solution #5**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-211194**.

**S3-211142 Resolution of Editor’s Notes and clarification on handling of Legacy UEs in Solution #5**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-211195**.

**S3-211143 Removal of Editor’s Note (#4) in Solution #5**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Samsung*

**Decision:** The document was **revised to S3-211196**.

**S3-211194 Removal of Editor’s Note (1 and 5) in Solution #5**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Samsung*

(Replaces S3-211141)

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

**S3-211195 Resolution of Editor’s Notes and clarification on handling of Legacy UEs in Solution #5**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Samsung*

(Replaces S3-211142)

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

**S3-211196 Removal of Editor’s Note (#4) in Solution #5**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Samsung*

(Replaces S3-211143)

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

**S3-211245 Update to Solution#4**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Lenovo, Motorola Mobility*

(Replaces S3-211117)

**Abstract:**

This pCR proposes to update solution#4 in TR 33.864

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

**S3-211247 Update to Solution#6**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Lenovo, Motorola Mobility*

(Replaces S3-211119)

**Abstract:**

This pCR proposes to update solution#6 in TR 33.864

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

**S3-211248 Solution to enable Reallocated AMF to serve the UE**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Lenovo, Motorola Mobility*

(Replaces S3-211121)

**Abstract:**

This pCR proposes a solution to address KI#1 in TR 33.864

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

**S3-211279 Direct UE connection to Slice AMF**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-210858)

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

**S3-211285 AMF reallocation: Update to solution #2**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Ericsson*

(Replaces S3-211091)

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

**S3-211286 AMF re-allocation: New solution with reroute of Registration Request and protected security context via RAN**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Ericsson*

(Replaces S3-211093)

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

**S3-211288 Draft TR 33.864 v0.4.0 Study on the security of Access and Mobility Management Function (AMF) re-allocation**

*Type: draft TR For: Approval  
 33.864 v0.4.0  
 Source: Ericsson Hungary Ltd*

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

**S3-211315 AMFReal: Evaluation to solution #1**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Huawei, Hisilicon*

(Replaces S3-210957)

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

**S3-211316 AMFReal: Updates to solution #3**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Huawei, Hisilicon*

(Replaces S3-210959)

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

**S3-211334 Addressing the ENs on ngKSI in solution #1**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211055)

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

**S3-211335 Addressing the EN on determining whether there is an AMF re-allocation in solution #1**

*Type: pCR For: Approval  
 33.864 v0.3.0  
 Source: Qualcomm Incorporated*

(Replaces S3-211056)

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

### 2.18 Study on Security for NR Integrated Access and Backhaul

**S3-210815 LS on using MOBIKE in Integrated Access and Backhaul system**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: R3-211297*

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

**S3-210859 Discussion paper on LS on MOBIKE in IAB**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210860 draft reply LS on MOBIKE in IAB**

*Type: LS out For: Approval  
 to RAN3  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210913 F1 interface security for IAB in NR-DC mode**

*Type: pCR For: Approval  
 33.824 v0.8.0  
 Source: Huawei, HiSilicon*

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

### 2.19 Study on the security of the system enablers for devices having multiple Universal Subscriber Identity Modules

**S3-210861 Key issue on Paging cause security**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell, Samsung*

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

**S3-210862 Solution for secure BUSY indication**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell, Lenovo, Motorola Mobility*

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

**S3-210863 Solution for secure paging cause**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210927 A new solution to protect busy indication**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Huawei, HiSilicon*

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

**S3-210928 A new Key issue on paging cause**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Huawei, HiSilicon*

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

**S3-210981 Key issue on security aspects of Paging Cause**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Intel Deutschland GmbH*

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

**S3-210982 Conclusion to Key issue 1**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Intel Deutschland GmbH*

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

**S3-210983 Updates to solution 1**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Intel Deutschland GmbH*

**Decision:** The document was **revised to S3-211280**.

**S3-211031 MUSIM-Addressing the EN in solution#1**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Apple*

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

**S3-211096 MUSIM: Resolving the EN regarding SA2’s decision on Busy Indication**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Xiaomi Technology*

**Abstract:**

This pCR proposes to resolve the Editor’s Note regarding SA2’s dependence by replacing it with the current conclusion drawn by SA2.

**Decision:** The document was **revised to S3-211275**.

**S3-211097 MUSIM: Updating the threat analysis in Key Issue #1**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Xiaomi Technology*

**Abstract:**

The pCR is proposed to update the current threat analysis and potential requirements in key issue #1 of TR 33.873.

**Decision:** The document was **revised to S3-211276**.

**S3-211098 MUSIM: Updating Key Issue #2 with Threats and Requirements**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Xiaomi Technology*

**Abstract:**

The pCR is proposed to update the current key issue #2 with threats and potential requirements.

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

**S3-211099 MUSIM: Adding a New Key Issue on User Privacy**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Xiaomi Technology*

**Abstract:**

This pCR is proposed to add a new key issue in TR 33.873 for the privacy of users on a Multi-USIM device.

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

**S3-211100 MUSIM: Updating Solution #1**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Xiaomi Technology*

**Abstract:**

This pCR is proposed to update the current solution #1 in TR 33.873.

**Decision:** The document was **revised to S3-211277**.

**S3-211145 Key issue on User authorization for MUSIM optimizations**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Samsung*

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

**S3-211146 Key Issue on home network authorization for MUSIM optimizations**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Samsung*

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

**S3-211275 MUSIM: Resolving the EN regarding SA2’s decision on Busy Indication**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Xiaomi Technology*

(Replaces S3-211096)

**Abstract:**

This pCR proposes to resolve the Editor’s Note regarding SA2’s dependence by replacing it with the current conclusion drawn by SA2.

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

**S3-211276 MUSIM: Updating the threat analysis in Key Issue #1**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Xiaomi Technology*

(Replaces S3-211097)

**Abstract:**

The pCR is proposed to update the current threat analysis and potential requirements in key issue #1 of TR 33.873.

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

**S3-211277 MUSIM: Updating Solution #1**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Xiaomi Technology*

(Replaces S3-211100)

**Abstract:**

This pCR is proposed to update the current solution #1 in TR 33.873.

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

**S3-211280 Updates to solution 1**

*Type: pCR For: Approval  
 33.873 v0.2.0  
 Source: Intel Deutschland GmbH*

(Replaces S3-210983)

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

**S3-211284 draft TR Study on the security of the system enablers for devices having multiple Universal Subscriber Identity Modules**

*Type: draft TR For: (not specified)  
 33.873 v0.3.0  
 Source: Intel Deutschland GmbH*

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

### 2.20 Study on enhanced Security Aspects of the 5G Service Based Architecture

**S3-210812 LS on Identification of source PLMN-ID in SBA**

*Type: LS in For: (not specified)  
 Original outgoing LS: -, to -, cc -  
 Source: C4-210249*

**Decision:** The document was **replied to in S3-211204**.

**S3-210822 Reply-LS on Identification of source PLMN-ID in SBA**

*Type: LS out For: Approval  
 to CT4, cc GSMA 5GJA  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211204**.

**S3-210966 Requirement of subscribe-notification key issue**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Huawei, Hisilicon*

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

**S3-210967 Solution for non-delegated subscribe-notification key issue**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Huawei, Hisilicon*

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

**S3-210968 Update on Key issue #1**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Huawei, Hisilicon*

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

**S3-211045 New Key Issue: Roaming case for token-based authorization in indirect communication**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Ericsson*

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

**S3-211046 New Solution to KI#4: Using existing procedures for authorization of SCP to act on behalf of an NF Consumer**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Ericsson*

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

**S3-211047 New Solution to KI#5: End-to-end integrity protection of HTTP body and method**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Ericsson*

**Decision:** The document was **revised to S3-211205**.

**S3-211118 LS on end-to-end protection of HTTP message for Indirect communication**

*Type: LS out For: Approval  
 to CT4  
 Source: CableLabs, Mavenir, Nokia, Nokia Bell Labs*

**Decision:** The document was **revised to S3-211231**.

**S3-211156 Rapporteurs update to 33.875**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211224**.

**S3-211157 Mapping of solutions to key issues**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211225**.

**S3-211158 KI details added to NRF NF authentication in indirect communication**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211170**.

**S3-211159 Service request authenticity verification in indirect communication**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211223**.

**S3-211160 NF-SCP authorization**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211220**.

**S3-211161 Service response verification in indirect communication**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211217**.

**S3-211162 Authorization of multiple consumers within a NF set**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211163 KI on Roaming with token based authorization in indirect communication**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211164 Trust model**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211165 NRF service management**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-211166 More details on SCP deployment models**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **revised to S3-211218**.

**S3-211170 KI details added to End-to-end integrity protection of HTTP messages**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211158)

**Decision:** The document was **revised to S3-211221**.

**S3-211204 Reply-LS on Identification of source PLMN-ID in SBA**

*Type: LS out For: Approval  
 to CT4, cc GSMA 5GJA  
 Source: Ericsson*

(Replaces S3-210822)

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

**S3-211205 New Solution to KI#5: End-to-end integrity protection of HTTP body and method**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Ericsson*

(Replaces S3-211047)

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

**S3-211217 Service response verification in indirect communication**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211161)

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

**S3-211218 More details on SCP deployment models**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211166)

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

**S3-211219 New Solution to KI#4: Using existing procedures for authorization of SCP to act on behalf of an NF Consumer**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Ericsson*

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

**S3-211220 NF-SCP authorization**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211160)

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

**S3-211221 KI details added to End-to-end integrity protection of HTTP messages**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211170)

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

**S3-211223 Service request authenticity verification in indirect communication**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211159)

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

**S3-211224 Rapporteurs update to 33.875**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211156)

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

**S3-211225 Mapping of solutions to key issues**

*Type: pCR For: Approval  
 33.875 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces S3-211157)

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

**S3-211231 LS on end-to-end protection of HTTP message for Indirect communication**

*Type: LS out For: Approval  
 to CT4  
 Source: CableLabs, Mavenir, Nokia, Nokia Bell Labs*

(Replaces S3-211118)

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

**S3-211344 Draft TR 33.875**

*Type: draft TR For: Approval  
 33.875 v0.2.0  
 Source: Nokia*

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

### 2.21 Study on enhanced security for network slicing Phase 2

**S3-210864 key issue on secure connection to RAN slice**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

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

**S3-210986 skeleton for eNS2 TR**

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

**Decision:** The document was **revised to S3-211266**.

**S3-210987 Introduction for eNS2 TR**

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

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

**S3-210988 Scope of eNS2 study**

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

**Decision:** The document was **revised to S3-211264**.

**S3-210989 New KI - slice authorization under UE quota constraint**

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

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

**S3-210990 New KI - privacy issue on broadcasting slice information**

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

**Decision:** The document was **revised to S3-211265**.

**S3-211264 Scope of eNS2 study**

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

(Replaces S3-210988)

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

**S3-211265 New KI - privacy issue on broadcasting slice information**

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

(Replaces S3-210990)

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

**S3-211266 Draft TR for eNS2 Study**

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

(Replaces S3-210986)

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

## Annex A: Contribution documents and status

### A1: List of TDocs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Document | Title | Source | Decision | Replaces | Replaced by |
| S3-210810 | Agenda | WG Chair | approved |  |  |
| S3-210811 | E-meeting procedures | WG Chair | noted |  |  |
| S3-210812 | LS on Identification of source PLMN-ID in SBA | C4-210249 | replied to |  |  |
| S3-210813 | Reply LS on the user consent for trace reporting | R2-2010894 | replied to |  |  |
| S3-210814 | Reply LS on 5MBS progress and issues to address | R2-2102480 | replied to |  |  |
| S3-210815 | LS on using MOBIKE in Integrated Access and Backhaul system | R3-211297 | postponed |  |  |
| S3-210816 | Reply LS on IP address to GPSI translation | S2-2009339 | postponed |  |  |
| S3-210817 | LS on propagation of user consent related information during Xn inter-PLMN handover | R3-204378 | replied to |  |  |
| S3-210818 | Reply to LS on Resynchronisations | ETSI SAGE | postponed |  |  |
| S3-210819 | LS on Security Requirements for Sidelink/PC5 Relays | S2-2004750 | noted |  |  |
| S3-210820 | New Solution for privacy with Layer-2 based UE-to-UE Relay and Adaptation Layer | InterDigital, Inc. | noted |  |  |
| S3-210821 | Privacy considerations for Adaptation Layer and Layer-2 based UE-to-UE Relay | InterDigital, Inc. | noted |  |  |
| S3-210822 | Reply-LS on Identification of source PLMN-ID in SBA | Ericsson | revised |  | S3-211204 |
| S3-210823 | DRAFT LS on Layer-2 based UE-to-UE Relay utilizing Adaptation Layer | InterDigital, Inc. | noted |  |  |
| S3-210824 | Solution for privacy handling with Layer-3 based UE-to-UE Relay | InterDigital, Inc. | noted |  |  |
| S3-210825 | TR 33.847 Update for solution #10 | InterDigital, Inc. | revised |  | S3-211240 |
| S3-210826 | TR 33.847 Update for solution #24 | InterDigital, Inc. | revised |  | S3-211242 |
| S3-210827 | TR 33.847 Update for solution #25 | InterDigital, Inc. | approved |  |  |
| S3-210828 | Updated Solution #22: Representation of identities during broadcast | KPN N.V. | revised |  | S3-211179 |
| S3-210829 | Administration of the virtualisation fabric | NCSC | revised |  | S3-211340 |
| S3-210830 | Updated Solution #23: Initial key with validity time | KPN N.V. | revised |  | S3-211185 |
| S3-210831 | TR 33.854 Solution#3 evaluation | InterDigital, Europe, Ltd. | revised |  | S3-211251 |
| S3-210832 | TR 33.854 Solution#5 evaluation | InterDigital, Europe, Ltd. | revised |  | S3-211252 |
| S3-210833 | TR 33.854 Solution#12 evaluation | InterDigital, Europe, Ltd. | revised |  | S3-211254 |
| S3-210834 | TR 33.854 Update for KI#4 | InterDigital, Europe, Ltd. | revised |  | S3-211255 |
| S3-210835 | TR 33.854 Update for KI#6 | InterDigital, Europe, Ltd., Lenovo, Motorola Mobility | revised |  | S3-211256 |
| S3-210836 | TR 33.854 Conclusion for KI#4 | InterDigital, Europe, Ltd. | noted |  |  |
| S3-210837 | TR 33.854 Conclusion for KI#1 | InterDigital, Europe, Ltd. | noted |  |  |
| S3-210838 | TR 33.854 Conclusion for KI#2 | InterDigital, Europe, Ltd. | noted |  |  |
| S3-210839 | Update on Ki#27 Image Snapshot and VNF Mobility. | Nokia, Nokia Shanghai Bell | revised |  | S3-211341 |
| S3-210840 | Resolving UE ID privacy and format EN in solution 16 | Alibaba Group | revised |  | S3-211187 |
| S3-210841 | Editor note removal on SQNms protection by concealment with SUPI with f5 | Nokia, Nokia Shanghai Bell | revised |  | S3-211181 |
| S3-210842 | Update to mapping table | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-210843 | Assuring SUCI generation by legitimiate SUPI owner using KSUCI | Nokia, Nokia Shanghai Bell | revised |  | S3-211182 |
| S3-210844 | Update to Solution 4.5 AUTS SQNMS solution for 5GS to add a note | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-210845 | Evaluation of solution 2.3 Unified authentication response message by UE | Nokia, Nokia Shanghai Bell | revised |  | S3-211177 |
| S3-210846 | Evaluation of solution 2.2 Encryption of authentication failure message types by UE with new keys derived from K\_AUSF | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-210847 | Evaluation of solution 2.4 MAC-S based solution | Nokia, Nokia Shanghai Bell | revised |  | S3-211178 |
| S3-210848 | MAC, SYNCH failure cause concealment solution | Nokia, Nokia Shanghai Bell | revised |  | S3-211183 |
| S3-210849 | Key issue risk assessment | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-210850 | TR 33.847: Solution #18 | THALES | approved |  |  |
| S3-210851 | TR 33.846: update of solution #4.7 | THALES | merged |  | S3-211181 |
| S3-210852 | TR 33.846: evaluation of solution #3.1 | THALES | revised |  | S3-211210 |
| S3-210853 | TR 33.846: impacts of solutions | THALES | revised |  | S3-211211 |
| S3-210854 | TR 33.846: conclusion for KI #4.1 | THALES | noted |  |  |
| S3-210855 | Discussion paper on GPSI translation to Temperary UE id | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-210856 | Reply LS on GPSI translation for Edge AS | Nokia, Nokia Shanghai Bell | merged |  | S3-211059 |
| S3-210857 | Secure framewrok for MBS key distribution | Nokia, Nokia Shanghai Bell | revised |  | S3-211278 |
| S3-210858 | Direct UE connection to Slice AMF | Nokia, Nokia Shanghai Bell | revised |  | S3-211279 |
| S3-210859 | Discussion paper on LS on MOBIKE in IAB | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-210860 | draft reply LS on MOBIKE in IAB | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-210861 | Key issue on Paging cause security | Nokia, Nokia Shanghai Bell, Samsung | noted |  |  |
| S3-210862 | Solution for secure BUSY indication | Nokia, Nokia Shanghai Bell, Lenovo, Motorola Mobility | noted |  |  |
| S3-210863 | Solution for secure paging cause | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-210864 | key issue on secure connection to RAN slice | Nokia, Nokia Shanghai Bell | merged |  | S3-211265 |
| S3-210865 | EN resolution for KI#1 | LG Electronics Inc. | noted |  |  |
| S3-210866 | Update for Sol#13 | LG Electronics Inc. | revised |  | S3-211174 |
| S3-210867 | Evaluation for Sol#13 | LG Electronics Inc. | revised |  | S3-211175 |
| S3-210868 | Add evaluation to solution#5 | CATT | revised |  | S3-211268 |
| S3-210869 | Add evaluation to solution#6 | CATT | revised |  | S3-211269 |
| S3-210870 | Modification on solution #6 | CATT | approved |  |  |
| S3-210871 | Remove EN in solution#5 | CATT | approved |  |  |
| S3-210872 | Add new key issue for user consent in TR 33.867 | CATT | revised |  | S3-211267 |
| S3-210873 | Add use case mapping part for Key Issue #1 in TR 33.867 | CATT | approved |  |  |
| S3-210874 | ProSE Direct Discovery Clarification in Out-of-Coverage Scenarios | MITRE Corporation | noted |  |  |
| S3-210875 | Update comparison table for solution 2.7 and 6.4 | ZTE Corporation | merged |  | S3-211211 |
| S3-210876 | EN resolution on null scheme for solution 2.7 | ZTE Corporation | revised |  | S3-211213 |
| S3-210877 | Text editing update on solution 2.7 | ZTE Corporation | merged |  | S3-211184 |
| S3-210878 | Solution of mitigating the SUPI guessing attacks | ZTE Corporation | approved |  |  |
| S3-210879 | Resolve the EN in Sol#4.6 | ZTE Corporation | approved |  |  |
| S3-210880 | Update mapping table in clause 6.0 | ZTE Corporation | approved |  |  |
| S3-210881 | Resolving the EN of solution #7 | ZTE Corporation | noted |  |  |
| S3-210882 | Resolving the EN of solution #17 | ZTE Corporation | noted |  |  |
| S3-210883 | Conclusion for key issue 9 | ZTE Corporation | merged |  | S3-211318 |
| S3-210884 | Removing ENs of Solution #3 | ZTE Corporation | revised |  | S3-211202 |
| S3-210885 | Removing ENs of Solution #4 | ZTE Corporation | revised |  | S3-211203 |
| S3-210886 | Update Solution#8 | ZTE Corporation | revised |  | S3-211188 |
| S3-210887 | New solution on control plane based provisioning - PS to AUSF | ZTE Corporation | noted |  |  |
| S3-210888 | New solution on control plane based provisioning - PS to UDM | ZTE Corporation | noted |  |  |
| S3-210889 | Definition of Network Slicing Isolation | ZTE Corporation | noted |  |  |
| S3-210890 | New key issue on Network Slicing Isolation | ZTE Corporation | noted |  |  |
| S3-210891 | Update and add evaluation to Solution #7 in TR 33.847 | Huawei, HiSilicon | revised |  | S3-211295 |
| S3-210892 | Address Editor's Note in Solution #27 | Huawei, HiSilicon | revised |  | S3-211296 |
| S3-210893 | Address Editor's Note in Solution #28 | Huawei, HiSilicon | revised |  | S3-211297 |
| S3-210894 | Update details and add evaluation to Solution #26 in TR 33.847 | Huawei, HiSilicon | approved |  |  |
| S3-210895 | Propose to resolve EN in KI#16 | Huawei, HiSilicon | approved |  |  |
| S3-210896 | New solution to prevent malicious revocation | Huawei, HiSilicon | approved |  |  |
| S3-210897 | new solution for PC5 one-to-one rekeying | Huawei, HiSilicon | revised |  | S3-211298 |
| S3-210898 | New solution to provide consisitent PDU session security for C2 | Huawei, HiSilicon | noted |  |  |
| S3-210899 | New Solution for Interworking from 5GS to EPS | Huawei, HiSilicon | revised |  | S3-211299 |
| S3-210900 | Conclusion for Key Issue #7 | Huawei, HiSilicon | noted |  |  |
| S3-210901 | Discussion Paper on Source of User Consent | Huawei, HiSilicon | noted |  |  |
| S3-210902 | Add Text for Source of User Consent for eNA | Huawei, HiSilicon | approved |  |  |
| S3-210903 | New Use Case for MEC | Huawei, HiSilicon, Samsung | approved |  |  |
| S3-210904 | Analysis for UC3S | Huawei, HiSilicon | approved |  |  |
| S3-210905 | New Solution for UE Related Analytics of NWDAF | Huawei, HiSilicon | revised |  | S3-211300 |
| S3-210906 | New Solution for Security for Provisioning of SNPN Credentials without Initial Credential | Huawei, HiSilicon | noted |  |  |
| S3-210907 | New Solution for Security for Provisioning of SNPN Credentials with initial credential | Huawei, HiSilicon | noted |  |  |
| S3-210908 | New Solution for Security for Provisioning of PNI-NPN Credentials with initial credential | Huawei, HiSilicon | noted |  |  |
| S3-210909 | Solution Update for Solution #5 | Huawei, HiSilicon | revised |  | S3-211301 |
| S3-210910 | Solution Update for Solution #12 | Huawei, HiSilicon | revised |  | S3-211302 |
| S3-210911 | Conclusion for Key Issue #1 | Huawei, HiSilicon | noted |  |  |
| S3-210912 | Solution Update for Solution #2 | Huawei, HiSilicon | revised |  | S3-211303 |
| S3-210913 | F1 interface security for IAB in NR-DC mode | Huawei, HiSilicon | noted |  |  |
| S3-210914 | New solution to mitigate the SUPI guessing attack | Huawei, HiSilicon | revised |  | S3-211304 |
| S3-210915 | Update for solution #3.1 | Huawei, HiSilicon | revised |  | S3-211305 |
| S3-210916 | Conclusion on key issue 1 | Huawei, HiSilicon | revised |  | S3-211306 |
| S3-210917 | Conclusion on key issue 4 | Huawei, HiSilicon | approved |  |  |
| S3-210918 | New solution to update the MBS keys | Huawei, HiSilicon | revised |  | S3-211307 |
| S3-210919 | Resolving the Editor's Notes in solution 2 | Huawei, HiSilicon | revised |  | S3-211308 |
| S3-210920 | Updating and resolving the Editor's Notes in solution 8 | Huawei, HiSilicon | approved |  |  |
| S3-210921 | Update solution#11 to meet privacy requirement | Huawei, HiSilicon | noted |  |  |
| S3-210922 | Add evaluation to solution#11 | Huawei, HiSilicon | revised |  | S3-211309 |
| S3-210923 | Address Editors Note in evaluation of solution #5 | Huawei, HiSilicon | merged |  | S3-211328 |
| S3-210924 | Add conclusion to KI#10 | Huawei, HiSilicon | noted |  |  |
| S3-210925 | Add evaluaition to solution#29 | Huawei, HiSilicon | revised |  | S3-211310 |
| S3-210926 | Add evaluaition to solution#30 | Huawei, HiSilicon | revised |  | S3-211311 |
| S3-210927 | A new solution to protect busy indication | Huawei, HiSilicon | noted |  |  |
| S3-210928 | A new Key issue on paging cause | Huawei, HiSilicon | noted |  |  |
| S3-210929 | Address the remaining ENs in solution 15 | Huawei, HiSilicon | revised |  | S3-211312 |
| S3-210930 | Address Editor's Note in solution 11 | Huawei, Hisilicon | approved |  |  |
| S3-210931 | Address Editor's Note in solution 8 | Huawei, Hisilicon | approved |  |  |
| S3-210932 | Evaluation of solution #14 | Huawei, Hisilicon | approved |  |  |
| S3-210933 | Add evaluation to solution 1 | CATT | revised |  | S3-211270 |
| S3-210934 | Add evaluation to solution 2 | CATT | revised |  | S3-211271 |
| S3-210935 | Add evaluation to solution 8 | CATT | approved |  |  |
| S3-210936 | Scope of SECAM SCAS | Futurewei Technologies | noted |  |  |
| S3-210937 | Scope of VNP evaluation | Futurewei Technologies | noted |  |  |
| S3-210938 | SECAM Assurance Level | Futurewei Technologies | noted |  |  |
| S3-210939 | SECAM Vendor Role | Futurewei Technologies | noted |  |  |
| S3-210940 | VNP SCAS Instantiation | Futurewei Technologies | revised |  | S3-211257 |
| S3-210941 | GVNP Type 2 hardening unnecessary service or protocol | Futurewei Technologies | noted |  |  |
| S3-210942 | GVNP Type 2 hardening unsupported component | Futurewei Technologies | noted |  |  |
| S3-210943 | GVNP Tyype 2 hardening unused function | Futurewei Technologies | noted |  |  |
| S3-210944 | GVNP Type 2 hardening unused software | Futurewei Technologies | noted |  |  |
| S3-210945 | Operational Environmental Security Assumptions | Futurewei Technologies | approved |  |  |
| S3-210946 | Monitoring | Futurewei Technologies | noted |  |  |
| S3-210947 | Dispute Resolution | Futurewei Technologies | noted |  |  |
| S3-210948 | Operator Acceptance Aspect | Futurewei Technologies | noted |  |  |
| S3-210949 | Discussion on GVNP Type 1 assets protection | Futurewei Technologies | noted |  |  |
| S3-210950 | GVNP Type 1 assets protection | Futurewei Technologies | noted |  |  |
| S3-210951 | More clarification on scope | Huawei, HiSilicon | noted |  |  |
| S3-210952 | New Solution for Authentication and Authorization between EEC and ECS/EES | Huawei, Hisilicon | revised |  | S3-211326 |
| S3-210953 | Editor notes removal | Huawei, Hisilicon | revised |  | S3-211314 |
| S3-210954 | Conclusions on KI#5 Roaming-related security mechanisms for SNPNs | Huawei, Hisilicon | noted |  |  |
| S3-210955 | Evaluation of solution#9 | Huawei, Hisilicon | revised |  | S3-211327 |
| S3-210956 | NPN: New solution to key issue #1 | Huawei, Hisilicon | noted |  |  |
| S3-210957 | AMFReal: Evaluation to solution #1 | Huawei, Hisilicon | revised |  | S3-211315 |
| S3-210958 | AMFReal: Evaluation to solution #2 | Huawei, Hisilicon | merged |  | S3-211285 |
| S3-210959 | AMFReal: Updates to solution #3 | Huawei, Hisilicon | revised |  | S3-211316 |
| S3-210960 | AMFReal: Evaluation to solution #4 | Huawei, Hisilicon | merged |  | S3-211245 |
| S3-210961 | AMFReal: Evaluation to solution #5 | Huawei, Hisilicon | approved |  |  |
| S3-210962 | AMFReal: Evaluation to solution #6 | Huawei, Hisilicon | merged |  | S3-211247 |
| S3-210963 | MBS: Updates to solution #4 | Huawei, Hisilicon | approved |  |  |
| S3-210964 | MBS: Evaluation to solution #4 | Huawei, Hisilicon | revised |  | S3-211317 |
| S3-210965 | MBS: Conclusion to key issue #1 | Huawei, Hisilicon | noted |  |  |
| S3-210966 | Requirement of subscribe-notification key issue | Huawei, Hisilicon | noted |  |  |
| S3-210967 | Solution for non-delegated subscribe-notification key issue | Huawei, Hisilicon | noted |  |  |
| S3-210968 | Update on Key issue #1 | Huawei, Hisilicon | noted |  |  |
| S3-210969 | EC: Conclusion for KI #9 | Huawei, Hisilicon | revised |  | S3-211318 |
| S3-210970 | EC: Update Solution #13 to include CP option | Huawei, Hisilicon | approved |  |  |
| S3-210971 | EC: Discussion for the authorization during EDN relocation | Huawei, Hisilicon | noted |  |  |
| S3-210972 | EC: Update of solution #22 | Huawei, Hisilicon | revised |  | S3-211319 |
| S3-210973 | EC: New solution for the authorization during EDN relocation | Huawei, Hisilicon | revised |  | S3-211320 |
| S3-210974 | EC: Conclusion for Key issue #5 | Huawei, Hisilicon | noted |  |  |
| S3-210975 | MitM FBS Detection | Huawei, HiSilicon, Philips | revised |  | S3-211261 |
| S3-210976 | add evaluation to solution 1 | Huawei, HiSilicon | revised |  | S3-211262 |
| S3-210977 | add evaluation to solution 11 | Huawei, HiSilicon | revised |  | S3-211263 |
| S3-210978 | Proposal for conclusion for Key Issue 1,2,4,6 | Intel Deutschland GmbH | noted |  |  |
| S3-210979 | Updates to solution 4 | Intel Deutschland GmbH | revised |  | S3-211281 |
| S3-210980 | Updates to solution 12 | Intel Deutschland GmbH | revised |  | S3-211282 |
| S3-210981 | Key issue on security aspects of Paging Cause | Intel Deutschland GmbH | noted |  |  |
| S3-210982 | Conclusion to Key issue 1 | Intel Deutschland GmbH | noted |  |  |
| S3-210983 | Updates to solution 1 | Intel Deutschland GmbH | revised |  | S3-211280 |
| S3-210984 | Updates to solution 14: Add detailed steps | Intel Deutschland GmbH | revised |  | S3-211283 |
| S3-210985 | Updates to solution 14: Removal of Editor’s notes and Evaluation | Intel Deutschland GmbH | noted |  |  |
| S3-210986 | skeleton for eNS2 TR | Huawei, HiSilicon | revised |  | S3-211266 |
| S3-210987 | Introduction for eNS2 TR | Huawei, HiSilicon | noted |  |  |
| S3-210988 | Scope of eNS2 study | Huawei, HiSilicon | revised |  | S3-211264 |
| S3-210989 | New KI - slice authorization under UE quota constraint | Huawei, HiSilicon | noted |  |  |
| S3-210990 | New KI - privacy issue on broadcasting slice information | Huawei, HiSilicon | revised |  | S3-211265 |
| S3-210991 | Proposal for conclusion for Key Issue 4 | Intel Deutschland GmbH | withdrawn |  |  |
| S3-210992 | SUCI Linkability attack | NEC | revised |  | S3-211236 |
| S3-210993 | New Solution for User Consent for Exposure of information to Edge Applications in Real Time | China Unicom | revised |  | S3-211342 |
| S3-210994 | pCR to TR33.847- Update Solution#29 | CATT | revised |  | S3-211272 |
| S3-210995 | pCR to TR33.847- Update Solution#30 | CATT | revised |  | S3-211273 |
| S3-210996 | Proposal for conclusion for Key Issue 4 | Intel Deutschland GmbH | withdrawn |  |  |
| S3-210997 | Proposal for conclusion for Key Issue 4 -rev | Intel Deutschland GmbH | noted |  |  |
| S3-210998 | Draft CR 33.501 updates to TSC Annex L | Nokia, Nokia Shanghai Bell | withdrawn |  |  |
| S3-210999 | Requirement and solution on multiple working domains | Nokia, Nokia Shanghai Bell | revised |  | S3-211226 |
| S3-211000 | KI4 update on NEF-AF | Nokia, Nokia Shanghai Bell | revised |  | S3-211228 |
| S3-211001 | Solution update on NEF-AF | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-211002 | Annex on asmmetric delay attacks | Nokia, Nokia Shanghai Bell, Deutsche Telekom | revised |  | S3-211227 |
| S3-211003 | Annex on Security considerations for integration with TSN | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-211004 | Solution to KI#2 (Provisioning of credentials) using AKMA | Ericsson | noted |  |  |
| S3-211005 | Resolving CP provisioning EN in solution #10 | Ericsson | approved |  |  |
| S3-211006 | Add evaluation to Solution #10 "Secure initial access to an SNPN onboarding network" | Ericsson | noted |  |  |
| S3-211007 | Updates to solution#10 on PS address | Ericsson | revised |  | S3-211206 |
| S3-211008 | Solution for privacy protection during initial access | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-211009 | Solution for providing secure onboarding without client authentication | Nokia, Nokia Shanghai Bell | revised |  | S3-211244 |
| S3-211010 | Solution for KI#1.3 | Lenovo, Motorola Mobility | revised |  | S3-211234 |
| S3-211011 | Reply LS on propagation of user consent related information during Xn inter-PLMN handover | Ericsson France S.A.S | revised |  | S3-211330 |
| S3-211012 | Solution for KI#1.4 | Lenovo, Motorola Mobility | merged |  | S3-211207 |
| S3-211013 | Clarifying the GVNP lifecycle in clause 5.2.5.5.7.1 | China Mobile | noted |  |  |
| S3-211014 | Modifying test case in clause 5.2.5.5.7.2 | China Mobile | noted |  |  |
| S3-211015 | Clarifying for the security requirements and test cases in clause 5.2.5.7.7.2 and 5.2.5.7.7.3 | China Mobile | noted |  |  |
| S3-211016 | Adding vendor development and product lifecycle processes and test laboratory accreditation into Clause 6 | China Mobile | noted |  |  |
| S3-211017 | proposal for way forward | China Mobile | noted |  |  |
| S3-211018 | Update key issue #2.2 in TR 33.846 | China Mobile | revised |  | S3-211049 |
| S3-211019 | Solution to Key issue #2.2 in TR 33.846 | China Mobile | revised |  | S3-211050 |
| S3-211020 | Update key issue #3.2 in TR 33.846 | China Mobile | revised |  | S3-211026 |
| S3-211021 | Removal of solution without any KI | China Mobile | noted |  |  |
| S3-211022 | Update for KI#1.3 | Lenovo, Motorola Mobility | noted |  |  |
| S3-211023 | Resolution of Editor’s Notes in Solution#7 | Lenovo, Motorola Mobility | revised |  | S3-211232 |
| S3-211024 | A new onboarding solution addressing KI#2 | Lenovo, Motorola Mobility | noted |  |  |
| S3-211025 | Update of Solution#6 | Lenovo, Motorola Mobility | revised |  | S3-211233 |
| S3-211026 | Update key issue #3.2 in TR 33.846 | China Mobile, ZTE, Huawei | approved | S3-211020 |  |
| S3-211027 | 5GFBS-Adding evaluation for solution#4 | Apple | noted |  |  |
| S3-211028 | 5GFBS-Adding evaluation for solution#17 | Apple | approved |  |  |
| S3-211029 | 5GFBS-Adding evaluation for solution#19 | Apple | noted |  |  |
| S3-211030 | 5GFBS-Conclusion for key issue#2 | Apple | noted |  |  |
| S3-211031 | MUSIM-Addressing the EN in solution#1 | Apple | approved |  |  |
| S3-211032 | ProSe-enhancement on discovery procedure | Apple | noted |  |  |
| S3-211033 | ProSe-Security solution during reselection via UE-to-UE relay | Apple | noted |  |  |
| S3-211034 | ProSe-Editorial in key issue#11 | Apple | approved |  |  |
| S3-211035 | MEC-New key issue on EEC ID privacy protection | Apple | noted |  |  |
| S3-211036 | MEC-New solution for key issue#10 | Apple | revised |  | S3-211176 |
| S3-211037 | MEC-Modification on key issue#4 | Apple | noted |  |  |
| S3-211038 | Update of scope of TR | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-211039 | KI on Ensuring restrictive transfer of ML models between authorized NWDAFs | Nokia, Nokia Shanghai Bell | revised |  | S3-211237 |
| S3-211040 | KI on UE data collection protection | Nokia, Nokia Shanghai Bell | approved |  |  |
| S3-211041 | Solution on Privacy preservation of data | Nokia, Nokia Shanghai Bell | revised |  | S3-211238 |
| S3-211042 | Solution on Abnormal NF behaviour detection | Nokia, Nokia Shanghai Bell | revised |  | S3-211239 |
| S3-211043 | Update of KI on Security protection of data via Message Framework | Nokia, Nokia Shanghai Bell | revised |  | S3-211241 |
| S3-211044 | High-level conclusions to KI#4 "Securing initial access for UE onboarding between UE and SNPN" | Ericsson | noted |  |  |
| S3-211045 | New Key Issue: Roaming case for token-based authorization in indirect communication | Ericsson | noted |  |  |
| S3-211046 | New Solution to KI#4: Using existing procedures for authorization of SCP to act on behalf of an NF Consumer | Ericsson | approved |  | - |
| S3-211047 | New Solution to KI#5: End-to-end integrity protection of HTTP body and method | Ericsson | revised |  | S3-211205 |
| S3-211048 | Security policy consistency during UE-to-UE relay path switch | Apple Computer Trading Co. Ltd | noted |  |  |
| S3-211049 | Update key issue #2.2 in TR 33.846 | China Mobile | approved | S3-211018 |  |
| S3-211050 | Solution to Key issue #2.2 in TR 33.846 | China Mobile | revised | S3-211019 | S3-211324 |
| S3-211051 | Solution on Providing the Security protection of data via Messaging | Ericsson | revised |  | S3-211207 |
| S3-211052 | Update on KI on Authorization of consumers for data access via DCCF | Ericsson | revised |  | S3-211209 |
| S3-211053 | Adding the revocation functionality to solution #14 | Qualcomm Incorporated | revised |  | S3-211331 |
| S3-211054 | Adding the revocation functionality to solution #13 | Qualcomm Incorporated | revised |  | S3-211333 |
| S3-211055 | Addressing the ENs on ngKSI in solution #1 | Qualcomm Incorporated | revised |  | S3-211334 |
| S3-211056 | Addressing the EN on determining whether there is an AMF re-allocation in solution #1 | Qualcomm Incorporated | revised |  | S3-211335 |
| S3-211057 | Some proposed text for the assessment of attack risk table | Qualcomm Incorporated | revised |  | S3-211336 |
| S3-211058 | Discussion on the LS on providing UE identity based on IP address | Qualcomm Incorporated | noted |  |  |
| S3-211059 | Reply LS on IP address to GPSI translation | Qualcomm Incorporated | noted |  |  |
| S3-211060 | Using TLS with AKMA to protect EDGE-1 and EDGE-4 | Qualcomm Incorporated | revised |  | S3-211337 |
| S3-211061 | Discussion on the LS on the user consent for trace reporting | Qualcomm Incorporated | noted |  |  |
| S3-211062 | Reply LS on the user consent for trace reporting | Qualcomm Incorporated | revised |  | S3-211338 |
| S3-211063 | Authorization of remote UE in L3 U2N relay | Qualcomm Incorporated | revised |  | S3-211291 |
| S3-211064 | New Key Issue on security policy handling for 5G Prose services | Qualcomm Incorporated, Huawei, Hisilicon, Ericsson | noted | S3-210482 |  |
| S3-211065 | EN resolution for solution #18 | Qualcomm Incorporated | approved |  |  |
| S3-211066 | EN resolution and evaluation for solution #20 | Qualcomm Incorporated | revised |  | S3-211292 |
| S3-211067 | Update the evaluation for solution #3 | Qualcomm Incorporated | revised |  | S3-211289 |
| S3-211068 | Update the evaluation for solution #4 | Qualcomm Incorporated | revised |  | S3-211290 |
| S3-211069 | EN resolution of Solution #1 | Qualcomm Incorporated | approved |  |  |
| S3-211070 | 5G MBS traffic protection at service-layer | Qualcomm Incorporated | revised |  | S3-211294 |
| S3-211071 | Conclusions for KI #2 | Qualcomm Incorporated | noted |  |  |
| S3-211072 | Evaluation on UE behavior on detection of false signature | Qualcomm Incorporated | noted |  |  |
| S3-211073 | Evaluation on signing key management | Qualcomm Incorporated | noted |  |  |
| S3-211074 | pCR: Further conclusions for KI #1 | Qualcomm Incorporated, CableLabs, Ericsson | noted |  |  |
| S3-211075 | pCR: Conclusions for KI #4 | Qualcomm Incorporated, CableLabs | noted |  |  |
| S3-211076 | pCR: Addressing the EN in solution #4 | Qualcomm Incorporated | revised |  | S3-211259 |
| S3-211077 | pCR: Addressing the SUPI privacy EN in solution #11 | Qualcomm Incorporated | approved |  |  |
| S3-211078 | pCR: Addressing the PS discovery EN in solution #11 | Qualcomm Incorporated | revised |  | S3-211260 |
| S3-211079 | IIOT: Resolve EN in solution #2 | Ericsson | approved |  |  |
| S3-211080 | IIOT: Update to KI#3 | Ericsson | revised |  | S3-211243 |
| S3-211081 | IIOT: Conclusion on KI#4 | Ericsson | revised |  | S3-211246 |
| S3-211082 | IIOT: Conclusion on KI#1 | Ericsson | merged |  | S3-211306 |
| S3-211083 | KI on Processing user consent depending on the regulatory and regional demands | Nokia, Nokia Shanghai Bell | merged |  | S3-211267 |
| S3-211084 | KI on Modification or revocation of user consent | Nokia, Nokia Shanghai Bell | noted |  | - |
| S3-211085 | KI on User consent for data collection | Nokia, Nokia Shanghai Bell | merged |  | S3-211267 |
| S3-211086 | Editorial updates to 33846-0100 | Nokia, Nokia Shanghai Bell | revised |  | S3-211184 |
| S3-211087 | ProSe: Update to solution #5 | Ericsson | revised |  | S3-211328 |
| S3-211088 | ProSe: Retrieve Discovery keys for UE-to-network relays | Ericsson | revised |  | S3-211229 |
| S3-211089 | ProSe: Update to solution #21 | Ericsson | revised |  | S3-211230 |
| S3-211090 | ProSe: Update to solution #6 | Ericsson | withdrawn |  |  |
| S3-211091 | AMF reallocation: Update to solution #2 | Ericsson | revised |  | S3-211285 |
| S3-211092 | AMF re-allocation: Definition of isolation | Ericsson | noted |  |  |
| S3-211093 | AMF re-allocation: New solution with reroute of Registration Request and protected security context via RAN | Ericsson | revised |  | S3-211286 |
| S3-211094 | AMF re-allocation: Notes from offline teleconference | Ericsson | noted |  |  |
| S3-211095 | AMF re-allocation: Update of the assumptions | Ericsson | noted |  |  |
| S3-211096 | MUSIM: Resolving the EN regarding SA2’s decision on Busy Indication | Xiaomi Technology | revised |  | S3-211275 |
| S3-211097 | MUSIM: Updating the threat analysis in Key Issue #1 | Xiaomi Technology | revised |  | S3-211276 |
| S3-211098 | MUSIM: Updating Key Issue #2 with Threats and Requirements | Xiaomi Technology | noted |  |  |
| S3-211099 | MUSIM: Adding a New Key Issue on User Privacy | Xiaomi Technology | noted |  |  |
| S3-211100 | MUSIM: Updating Solution #1 | Xiaomi Technology | revised |  | S3-211277 |
| S3-211101 | ProSe: Updating Key Issue #1 | Xiaomi Technology | noted |  |  |
| S3-211102 | ProSe: Updating Key Issue #9 | Xiaomi Technology | noted |  |  |
| S3-211103 | ProSe: Updating Key Issue #12 | Xiaomi Technology | noted |  |  |
| S3-211104 | ProSe: Updating Key Issue #16 | Xiaomi Technology | approved |  |  |
| S3-211105 | ProSe: Adding a New Key Issue on Security Policies for PC5 Direct Link | Xiaomi Technology | noted |  |  |
| S3-211106 | ProSe: Adding a New Key Issue on Security Policy with UE-to-Network Relay | Xiaomi Technology | noted |  |  |
| S3-211107 | ProSe: Adding a New Key Issue on Security Policy with UE-to-UE Relay | Xiaomi Technology | noted |  |  |
| S3-211108 | Reply LS to LS on Security Requirements for Sidelink/PC5 Relays | Xiaomi Technology | noted |  |  |
| S3-211109 | Solution for KI#2 using PKC without requiring tight time sync | Philips International B.V. | revised |  | S3-211329 |
| S3-211110 | Secondary authentication for Session Breakout | Ericsson | noted |  |  |
| S3-211111 | [Draft] LS on Secondary authentication for Session Breakout | Ericsson | noted |  |  |
| S3-211112 | IIoT: Update to solution #3 | Ericsson | revised |  | S3-211215 |
| S3-211113 | IIoT: Update to and conclusion on KI #2 | Ericsson | revised |  | S3-211216 |
| S3-211114 | EC: Update to solution #17 | Ericsson | revised |  | S3-211222 |
| S3-211115 | UAS: Update to solution #2 | Ericsson | revised |  | S3-211212 |
| S3-211116 | Editorials Solution #24 | Philips International B.V. | approved |  |  |
| S3-211117 | Update to Solution#4 | Lenovo, Motorola Mobility | revised |  | S3-211245 |
| S3-211118 | LS on end-to-end protection of HTTP message for Indirect communication | CableLabs, Mavenir, Nokia, Nokia Bell Labs | revised |  | S3-211231 |
| S3-211119 | Update to Solution#6 | Lenovo, Motorola Mobility | revised |  | S3-211247 |
| S3-211120 | Modification to address FFS about key update after re-authentication in Solution 2 | Philips International B.V. | merged |  | S3-211308 |
| S3-211121 | Solution to enable Reallocated AMF to serve the UE | Lenovo, Motorola Mobility | revised |  | S3-211248 |
| S3-211122 | Update to Solution#7 | Lenovo, Motorola Mobility | revised |  | S3-211249 |
| S3-211123 | pCR: Conclusion for KI #1 on receiving KAUSF from AAA | CableLabs | noted |  |  |
| S3-211124 | Resolving EN on UAVC Change | Lenovo, Motorola Mobility | revised |  | S3-211250 |
| S3-211125 | Update to Solution#15 | Lenovo, Motorola Mobility | revised |  | S3-211253 |
| S3-211126 | pCR: Conclusion for KI #1 on addressing security threat against KAUSF | CableLabs | noted |  |  |
| S3-211127 | Improve description of key update in Solution 2 by refering to Solution 9 | Philips International B.V. | approved |  |  |
| S3-211128 | New annex of TR 33.809 – attack taxonomy for 5G UE over radio interfaces | CableLabs, NTT Docomo, Philips, Deutsche Telekom AG | revised |  | S3-211235 |
| S3-211129 | [ProSe] Evaluation for solution#1 | Samsung | revised |  | S3-211198 |
| S3-211130 | [ProSe] Resolving ENs in solution#1 | Samsung | revised |  | S3-211199 |
| S3-211131 | Discussion for MitM attack | Samsung | noted |  |  |
| S3-211132 | [5GFBS] Identifying MitM attack | Samsung | noted |  |  |
| S3-211133 | New key issue for Restricted Access in AMF re-allocation | Samsung | noted |  |  |
| S3-211134 | Resolving ENs in Solution#1 | Samsung | revised |  | S3-211200 |
| S3-211135 | Solution on integrity protection of data transferred between AF and NWDAF | Samsung | revised |  | S3-211201 |
| S3-211136 | Correction to clause 5A.1.1 in TR 33.867 | Samsung | approved |  |  |
| S3-211137 | Key Issue on user consent for UE data analytics using NWDAF | Samsung | merged |  | S3-211267 |
| S3-211138 | Update on scope of User Consent | Samsung | revised |  | S3-211193 |
| S3-211139 | Solution on analytics for DoS attack detection | Samsung | noted |  |  |
| S3-211140 | Solution on analytics for MitM attack detection | Samsung | noted |  |  |
| S3-211141 | Removal of Editor’s Note (1 and 5) in Solution #5 | Samsung | revised |  | S3-211194 |
| S3-211142 | Resolution of Editor’s Notes and clarification on handling of Legacy UEs in Solution #5 | Samsung | revised |  | S3-211195 |
| S3-211143 | Removal of Editor’s Note (#4) in Solution #5 | Samsung | revised |  | S3-211196 |
| S3-211144 | [Solution] Key generation and distribution mechanism for MBS | Samsung | revised |  | S3-211197 |
| S3-211145 | Key issue on User authorization for MUSIM optimizations | Samsung | noted |  |  |
| S3-211146 | Key Issue on home network authorization for MUSIM optimizations | Samsung | noted |  |  |
| S3-211147 | TR 33.846: evaluation of solution #2.2 | THALES | revised |  | S3-211208 |
| S3-211148 | TR 33.846: conclusion for KI #2.1 | THALES | noted |  |  |
| S3-211149 | Resolving editor’s note in solution #32 | Philips International B.V. | revised |  | S3-211258 |
| S3-211150 | Update on Solution #21: Interworking handover from EPS to 5GS | Ericsson | revised |  | S3-211189 |
| S3-211151 | Update on Solution #22: S1 handover | Ericsson | revised |  | S3-211190 |
| S3-211152 | Update on Solution #23: X2 handover | Ericsson | approved |  |  |
| S3-211153 | Update on Solution #24: Interworking handover from 5GS to EPS | Ericsson | revised |  | S3-211191 |
| S3-211154 | pCR to 33.809 - addition of new key issue on false detections | VODAFONE Group Plc | noted |  |  |
| S3-211155 | pCR to 33.809 - addition of solution to False positive detections | VODAFONE Group Plc | withdrawn |  |  |
| S3-211156 | Rapporteurs update to 33.875 | Nokia, Nokia Shanghai Bell | revised |  | S3-211224 |
| S3-211157 | Mapping of solutions to key issues | Nokia, Nokia Shanghai Bell | revised |  | S3-211225 |
| S3-211158 | KI details added to NRF NF authentication in indirect communication | Nokia, Nokia Shanghai Bell | revised |  | S3-211170 |
| S3-211159 | Service request authenticity verification in indirect communication | Nokia, Nokia Shanghai Bell | revised |  | S3-211223 |
| S3-211160 | NF-SCP authorization | Nokia, Nokia Shanghai Bell | revised |  | S3-211220 |
| S3-211161 | Service response verification in indirect communication | Nokia, Nokia Shanghai Bell | revised |  | S3-211217 |
| S3-211162 | Authorization of multiple consumers within a NF set | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-211163 | KI on Roaming with token based authorization in indirect communication | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-211164 | Trust model | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-211165 | NRF service management | Nokia, Nokia Shanghai Bell | noted |  |  |
| S3-211166 | More details on SCP deployment models | Nokia, Nokia Shanghai Bell | revised |  | S3-211218 |
| S3-211167 | Update of key issue #7 with X2 handover and S1 handover | Ericsson | noted |  |  |
| S3-211168 | New solution for source eNB pre-configured with neighbour target eNB’s support of UP IP | Ericsson | revised |  | S3-211192 |
| S3-211169 | Use of criticality information | Ericsson | approved |  |  |
| S3-211170 | KI details added to End-to-end integrity protection of HTTP messages | Nokia, Nokia Shanghai Bell | revised | S3-211158 | S3-211221 |
| S3-211171 | Study item management and planning | WG Chair | noted |  |  |
| S3-211172 | Reply LS on IP address to GPSI translation | S2-2101307 | postponed |  |  |
| S3-211173 | Process and agenda presentation for SA3#102Bis-e | SA WG3 chair | noted |  |  |
| S3-211174 | Update for Sol#13 | LG Electronics Inc. | approved | S3-210866 |  |
| S3-211175 | Evaluation for Sol#13 | LG Electronics Inc. | approved | S3-210867 |  |
| S3-211176 | MEC-New solution for key issue#10 | Apple | approved | S3-211036 |  |
| S3-211177 | Evaluation of solution 2.3 Unified authentication response message by UE | Nokia, Nokia Shanghai Bell | approved | S3-210845 |  |
| S3-211178 | Evaluation of solution 2.4 MAC-S based solution | Nokia, Nokia Shanghai Bell | approved | S3-210847 |  |
| S3-211179 | Updated Solution #22: Representation of identities during broadcast | KPN N.V., MITRE | approved | S3-210828 |  |
| S3-211180 | TR 33.846: evaluation of solution #2.2 | THALES | withdrawn | - |  |
| S3-211181 | Editor note removal on SQNms protection by concealment with SUPI with f5 | Nokia, Nokia Shanghai Bell, Thales | approved | S3-210841 |  |
| S3-211182 | Assuring SUCI generation by legitimiate SUPI owner using KSUCI | Nokia, Nokia Shanghai Bell | approved | S3-210843 |  |
| S3-211183 | MAC, SYNCH failure cause concealment solution | Nokia, Nokia Shanghai Bell | approved | S3-210848 |  |
| S3-211184 | Editorial updates to 33846-0100 | Nokia, Nokia Shanghai Bell,ZTE | approved | S3-211086 |  |
| S3-211185 | Updated Solution #23: Initial key with validity time | TNO | approved | S3-210830 |  |
| S3-211186 | TR 33.853 v1.5.0 | VODAFONE Group Plc | approved |  |  |
| S3-211187 | Resolving UE ID privacy and format EN in solution 16 | Alibaba Group | approved | S3-210840 |  |
| S3-211188 | Update Solution#8 | ZTE Corporation | approved | S3-210886 |  |
| S3-211189 | Update on Solution #21: Interworking handover from EPS to 5GS | Ericsson | approved | S3-211150 |  |
| S3-211190 | Update on Solution #22: S1 handover | Ericsson | approved | S3-211151 |  |
| S3-211191 | Update on Solution #24: Interworking handover from 5GS to EPS | Ericsson | approved | S3-211153 |  |
| S3-211192 | New solution for source eNB pre-configured with neighbour target eNB’s support of UP IP | Ericsson | approved | S3-211168 |  |
| S3-211193 | Update on scope of User Consent | Samsung | approved | S3-211138 |  |
| S3-211194 | Removal of Editor’s Note (1 and 5) in Solution #5 | Samsung | approved | S3-211141 |  |
| S3-211195 | Resolution of Editor’s Notes and clarification on handling of Legacy UEs in Solution #5 | Samsung | approved | S3-211142 |  |
| S3-211196 | Removal of Editor’s Note (#4) in Solution #5 | Samsung | approved | S3-211143 |  |
| S3-211197 | [Solution] Key generation and distribution mechanism for MBS | Samsung | approved | S3-211144 |  |
| S3-211198 | [ProSe] Evaluation for solution#1 | Samsung | approved | S3-211129 |  |
| S3-211199 | [ProSe] Resolving ENs in solution#1 | Samsung | approved | S3-211130 |  |
| S3-211200 | Resolving ENs in Solution#1 | Samsung | approved | S3-211134 |  |
| S3-211201 | Solution on integrity protection of data transferred between AF and NWDAF | Samsung | approved | S3-211135 |  |
| S3-211202 | Removing ENs of Solution #3 | ZTE Corporation | approved | S3-210884 |  |
| S3-211203 | Removing ENs of Solution #4 | ZTE Corporation | approved | S3-210885 |  |
| S3-211204 | Reply-LS on Identification of source PLMN-ID in SBA | Ericsson | approved | S3-210822 |  |
| S3-211205 | New Solution to KI#5: End-to-end integrity protection of HTTP body and method | Ericsson | approved | S3-211047 |  |
| S3-211206 | Updates to solution#10 on PS address | Ericsson | approved | S3-211007 |  |
| S3-211207 | Solution on Providing the Security protection of data via Messaging | Ericsson, Lenovo, Motorola Mobility | approved | S3-211051 |  |
| S3-211208 | TR 33.846: evaluation of solution #2.2 | THALES, Nokia, Nokia Shanghai Bell | approved | S3-211147 |  |
| S3-211209 | Update on KI on Authorization of consumers for data access via DCCF | Ericsson, Lenovo, Motorola Mobility, Nokia, Nokia Shanghai Bell | approved | S3-211052 |  |
| S3-211210 | TR 33.846: evaluation of solution #3.1 | THALES | approved | S3-210852 |  |
| S3-211211 | TR 33.846: impacts of solutions | THALES, ZTE | approved | S3-210853 |  |
| S3-211212 | UAS: Update to solution #2 | Ericsson | approved | S3-211115 |  |
| S3-211213 | EN resolution on null scheme for solution 2.7 | ZTE Corporation | approved | S3-210876 |  |
| S3-211214 | KI on Modification or revocation of user consent | Nokia, Nokia Shanghai Bell | withdrawn | - |  |
| S3-211215 | IIoT: Update to solution #3 | Ericsson | approved | S3-211112 |  |
| S3-211216 | IIoT: Update to and conclusion on KI #2 | Ericsson, Nokia, Nokia Shanghai Bell | approved | S3-211113 |  |
| S3-211217 | Service response verification in indirect communication | Nokia, Nokia Shanghai Bell | approved | S3-211161 |  |
| S3-211218 | More details on SCP deployment models | Nokia, Nokia Shanghai Bell | approved | S3-211166 |  |
| S3-211219 | New Solution to KI#4: Using existing procedures for authorization of SCP to act on behalf of an NF Consumer | Ericsson | withdrawn | - |  |
| S3-211220 | NF-SCP authorization | Nokia, Nokia Shanghai Bell | approved | S3-211160 |  |
| S3-211221 | KI details added to End-to-end integrity protection of HTTP messages | Nokia, Nokia Shanghai Bell | approved | S3-211170 |  |
| S3-211222 | EC: Update to solution #17 | Ericsson | approved | S3-211114 |  |
| S3-211223 | Service request authenticity verification in indirect communication | Nokia, Nokia Shanghai Bell | approved | S3-211159 |  |
| S3-211224 | Rapporteurs update to 33.875 | Nokia, Nokia Shanghai Bell | approved | S3-211156 |  |
| S3-211225 | Mapping of solutions to key issues | Nokia, Nokia Shanghai Bell | approved | S3-211157 |  |
| S3-211226 | Requirement and solution on multiple working domains | Nokia, Nokia Shanghai Bell | approved | S3-210999 |  |
| S3-211227 | Annex on asmmetric delay attacks | Nokia, Nokia Shanghai Bell, Deutsche Telekom | approved | S3-211002 |  |
| S3-211228 | KI4 update on NEF-AF | Nokia, Nokia Shanghai Bell | approved | S3-211000 |  |
| S3-211229 | ProSe: Retrieve Discovery keys for UE-to-network relays | Ericsson | approved | S3-211088 |  |
| S3-211230 | ProSe: Update to solution #21 | Ericsson | approved | S3-211089 |  |
| S3-211231 | LS on end-to-end protection of HTTP message for Indirect communication | CableLabs, Mavenir, Nokia, Nokia Bell Labs | approved | S3-211118 |  |
| S3-211232 | Resolution of Editor’s Notes in Solution#7 | Lenovo, Motorola Mobility | approved | S3-211023 |  |
| S3-211233 | Update of Solution#6 | Lenovo, Motorola Mobility | approved | S3-211025 |  |
| S3-211234 | Solution for KI#1.3 | Lenovo, Motorola Mobility | approved | S3-211010 |  |
| S3-211235 | New annex of TR 33.809 – attack taxonomy for 5G UE over radio interfaces | CableLabs, NTT Docomo, Philips, Deutsche Telekom AG | approved | S3-211128 |  |
| S3-211236 | SUCI Linkability attack | NEC | approved | S3-210992 |  |
| S3-211237 | KI on Ensuring restrictive transfer of ML models between authorized NWDAFs | Nokia, Nokia Shanghai Bell | approved | S3-211039 |  |
| S3-211238 | Solution on Privacy preservation of data | Nokia, Nokia Shanghai Bell | noted | S3-211041 |  |
| S3-211239 | Solution on Abnormal NF behaviour detection | Nokia, Nokia Shanghai Bell | approved | S3-211042 |  |
| S3-211240 | TR 33.847 Update for solution #10 | InterDigital, Inc. | approved | S3-210825 |  |
| S3-211241 | Update of KI on Security protection of data via Message Framework | Nokia, Nokia Shanghai Bell | approved | S3-211043 |  |
| S3-211242 | TR 33.847 Update for solution #24 | InterDigital, Inc. | approved | S3-210826 |  |
| S3-211243 | IIOT: Update to KI#3 | Ericsson | approved | S3-211080 |  |
| S3-211244 | Solution for providing secure onboarding without client authentication | Nokia, Nokia Shanghai Bell | approved | S3-211009 |  |
| S3-211245 | Update to Solution#4 | Lenovo, Motorola Mobility | approved | S3-211117 |  |
| S3-211246 | IIOT: Conclusion on KI#4 | Ericsson, Nokia, Nokia Shanghai Bell | approved | S3-211081 |  |
| S3-211247 | Update to Solution#6 | Lenovo, Motorola Mobility | approved | S3-211119 |  |
| S3-211248 | Solution to enable Reallocated AMF to serve the UE | Lenovo, Motorola Mobility | approved | S3-211121 |  |
| S3-211249 | Update to Solution#7 | Lenovo, Motorola Mobility | approved | S3-211122 |  |
| S3-211250 | Resolving EN on UAVC Change | Lenovo, Motorola Mobility | approved | S3-211124 |  |
| S3-211251 | TR 33.854 Solution#3 evaluation | InterDigital, Europe, Ltd. | approved | S3-210831 |  |
| S3-211252 | TR 33.854 Solution#5 evaluation | InterDigital, Europe, Ltd. | approved | S3-210832 |  |
| S3-211253 | Update to Solution#15 | Lenovo, Motorola Mobility | approved | S3-211125 |  |
| S3-211254 | TR 33.854 Solution#12 evaluation | InterDigital, Europe, Ltd. | approved | S3-210833 |  |
| S3-211255 | TR 33.854 Update for KI#4 | InterDigital, Europe, Ltd. | approved | S3-210834 |  |
| S3-211256 | TR 33.854 Update for KI#6 | InterDigital, Europe, Ltd., Lenovo, Motorola Mobility | approved | S3-210835 |  |
| S3-211257 | VNP SCAS Instantiation | Futurewei Technologies | approved | S3-210940 |  |
| S3-211258 | Resolving editor’s note in solution #32 | Philips International B.V. | approved | S3-211149 |  |
| S3-211259 | pCR: Addressing the EN in solution #4 | Qualcomm Incorporated | approved | S3-211076 |  |
| S3-211260 | pCR: Addressing the PS discovery EN in solution #11 | Qualcomm Incorporated | approved | S3-211078 |  |
| S3-211261 | MitM FBS Detection | Huawei, HiSilicon, Philips | approved | S3-210975 |  |
| S3-211262 | add evaluation to solution 1 | Huawei, HiSilicon | approved | S3-210976 |  |
| S3-211263 | add evaluation to solution 11 | Huawei, HiSilicon | approved | S3-210977 |  |
| S3-211264 | Scope of eNS2 study | Huawei, HiSilicon | approved | S3-210988 |  |
| S3-211265 | New KI - privacy issue on broadcasting slice information | Huawei, HiSilicon, Nokia | approved | S3-210990 |  |
| S3-211266 | Draft TR for eNS2 Study | Huawei, HiSilicon | approved | S3-210986 |  |
| S3-211267 | Add new key issue for user consent in TR 33.867 | CATT | approved | S3-210872 |  |
| S3-211268 | Add evaluation to solution#5 | CATT | approved | S3-210868 |  |
| S3-211269 | Add evaluation to solution#6 | CATT | approved | S3-210869 |  |
| S3-211270 | Add evaluation to solution 1 | CATT | approved | S3-210933 |  |
| S3-211271 | Add evaluation to solution 2 | CATT | approved | S3-210934 |  |
| S3-211272 | pCR to TR33.847- Update Solution#29 | CATT | approved | S3-210994 |  |
| S3-211273 | pCR to TR33.847- Update Solution#30 | CATT | approved | S3-210995 |  |
| S3-211274 | Draft TR 33.847 v0.5.0 Study on Security Aspects of Enhancement for Proximity Based Services in 5GS | CATT | approved |  |  |
| S3-211275 | MUSIM: Resolving the EN regarding SA2’s decision on Busy Indication | Xiaomi Technology | approved | S3-211096 |  |
| S3-211276 | MUSIM: Updating the threat analysis in Key Issue #1 | Xiaomi Technology | approved | S3-211097 |  |
| S3-211277 | MUSIM: Updating Solution #1 | Xiaomi Technology | approved | S3-211100 |  |
| S3-211278 | Secure framewrok for MBS key distribution | Nokia, Nokia Shanghai Bell | approved | S3-210857 |  |
| S3-211279 | Direct UE connection to Slice AMF | Nokia, Nokia Shanghai Bell | approved | S3-210858 |  |
| S3-211280 | Updates to solution 1 | Intel Deutschland GmbH | approved | S3-210983 |  |
| S3-211281 | Updates to solution 4 | Intel Deutschland GmbH | approved | S3-210979 |  |
| S3-211282 | Updates to solution 12 | Intel Deutschland GmbH | approved | S3-210980 |  |
| S3-211283 | Updates to solution 14: Add detailed steps | Intel Deutschland GmbH | approved | S3-210984 |  |
| S3-211284 | draft TR Study on the security of the system enablers for devices having multiple Universal Subscriber Identity Modules | Intel Deutschland GmbH | approved |  |  |
| S3-211285 | AMF reallocation: Update to solution #2 | Ericsson | approved | S3-211091 |  |
| S3-211286 | AMF re-allocation: New solution with reroute of Registration Request and protected security context via RAN | Ericsson | approved | S3-211093 |  |
| S3-211287 | Draft TR 33.846 v0.11.0 Study on authentication enhancements in the 5G System (5GS) | Ericsson Hungary Ltd | approved |  |  |
| S3-211288 | Draft TR 33.864 v0.4.0 Study on the security of Access and Mobility Management Function (AMF) re-allocation | Ericsson Hungary Ltd | approved |  |  |
| S3-211289 | Update the evaluation for solution #3 | Qualcomm Incorporated | approved | S3-211067 |  |
| S3-211290 | Update the evaluation for solution #4 | Qualcomm Incorporated | approved | S3-211068 |  |
| S3-211291 | Authorization of remote UE in L3 U2N relay | Qualcomm Incorporated | approved | S3-211063 |  |
| S3-211292 | EN resolution and evaluation for solution #20 | Qualcomm Incorporated | approved | S3-211066 |  |
| S3-211293 | Draft TR 33.850 | Huawei, HiSilicon | approved |  |  |
| S3-211294 | 5G MBS traffic protection at service-layer | Qualcomm Incorporated | approved | S3-211070 |  |
| S3-211295 | Update and add evaluation to Solution #7 in TR 33.847 | Huawei, HiSilicon | approved | S3-210891 |  |
| S3-211296 | Address Editor's Note in Solution #27 | Huawei, HiSilicon | approved | S3-210892 |  |
| S3-211297 | Address Editor's Note in Solution #28 | Huawei, HiSilicon | approved | S3-210893 |  |
| S3-211298 | new solution for PC5 one-to-one rekeying | Huawei, HiSilicon | approved | S3-210897 |  |
| S3-211299 | New Solution for Interworking from 5GS to EPS | Huawei, HiSilicon | approved | S3-210899 |  |
| S3-211300 | New Solution for UE Related Analytics of NWDAF | Huawei, HiSilicon | approved | S3-210905 |  |
| S3-211301 | Solution Update for Solution #5 | Huawei, HiSilicon | approved | S3-210909 |  |
| S3-211302 | Solution Update for Solution #12 | Huawei, HiSilicon | approved | S3-210910 |  |
| S3-211303 | Solution Update for Solution #2 | Huawei, HiSilicon | approved | S3-210912 |  |
| S3-211304 | New solution to mitigate the SUPI guessing attack | Huawei, HiSilicon | approved | S3-210914 |  |
| S3-211305 | Update for solution #3.1 | Huawei, HiSilicon | approved | S3-210915 |  |
| S3-211306 | Conclusion on key issue 1 | Huawei, Hisilicon, Nokia, Nokia Shanghai Bell, Ericsson | approved | S3-210916 |  |
| S3-211307 | New solution to update the MBS keys | Huawei, HiSilicon | approved | S3-210918 |  |
| S3-211308 | Resolving the Editor's Notes in solution 2 | Huawei, HiSilicon | approved | S3-210919 |  |
| S3-211309 | Add evaluation to solution#11 | Huawei, HiSilicon | approved | S3-210922 |  |
| S3-211310 | Add evaluaition to solution#29 | Huawei, HiSilicon | approved | S3-210925 |  |
| S3-211311 | Add evaluaition to solution#30 | Huawei, HiSilicon | approved | S3-210926 |  |
| S3-211312 | Address the remaining ENs in solution 15 | Huawei, HiSilicon | approved | S3-210929 |  |
| S3-211313 | Reply LS on 5MBS progress and issues to address | Huawei, HiSilicon | approved |  |  |
| S3-211314 | Editor notes removal | Huawei, Hisilicon | approved | S3-210953 |  |
| S3-211315 | AMFReal: Evaluation to solution #1 | Huawei, Hisilicon | approved | S3-210957 |  |
| S3-211316 | AMFReal: Updates to solution #3 | Huawei, Hisilicon | approved | S3-210959 |  |
| S3-211317 | MBS: Evaluation to solution #4 | Huawei, Hisilicon | approved | S3-210964 |  |
| S3-211318 | EC: Conclusion for KI #9 | Huawei, Hisilicon, ZTE | approved | S3-210969 |  |
| S3-211319 | EC: Update of solution #22 | Huawei, Hisilicon | approved | S3-210972 |  |
| S3-211320 | EC: New solution for the authorization during EDN relocation | Huawei, Hisilicon | approved | S3-210973 |  |
| S3-211321 | TR 33.839 v0.5.0 | Huawei, Hisilicon | approved |  |  |
| S3-211322 | draft TR 33.866 0.4.0 | China Mobile | approved |  |  |
| S3-211323 | draft TR 33.862 0.4.0 | China Mobile | approved |  |  |
| S3-211324 | Solution to Key issue #2.2 in TR 33.846 | China Mobile | approved | S3-211050 |  |
| S3-211325 | TR 33.818 v0.11.0 | China Mobile Com. Corporation | approved |  |  |
| S3-211326 | New Solution for Authentication and Authorization between EEC and ECS/EES | Huawei, Hisilicon | approved | S3-210952 |  |
| S3-211327 | Evaluation of solution#9 | Huawei, Hisilicon | approved | S3-210955 |  |
| S3-211328 | ProSe: Update to solution #5 | Ericsson, Huawei, HiSilicon | approved | S3-211087 |  |
| S3-211329 | Solution for KI#2 using PKC without requiring tight time sync | Philips International B.V. | approved | S3-211109 |  |
| S3-211330 | Reply LS on propagation of user consent related information during Xn inter-PLMN handover | Ericsson France S.A.S | approved | S3-211011 |  |
| S3-211331 | Adding the revocation functionality to solution #14 | Qualcomm Incorporated | approved | S3-211053 |  |
| S3-211332 | TR 33.867 | Huawei;HiSilicon | approved |  |  |
| S3-211333 | Adding the revocation functionality to solution #13 | Qualcomm Incorporated | approved | S3-211054 |  |
| S3-211334 | Addressing the ENs on ngKSI in solution #1 | Qualcomm Incorporated | approved | S3-211055 |  |
| S3-211335 | Addressing the EN on determining whether there is an AMF re-allocation in solution #1 | Qualcomm Incorporated | approved | S3-211056 |  |
| S3-211336 | Some proposed text for the assessment of attack risk table | Qualcomm Incorporated, Nokia, Nokia Shanghai Bell | approved | S3-211057 |  |
| S3-211337 | Using TLS with AKMA to protect EDGE-1 and EDGE-4 | Qualcomm Incorporated | approved | S3-211060 |  |
| S3-211338 | Reply LS on the user consent for trace reporting | Qualcomm Incorporated | approved | S3-211062 |  |
| S3-211339 | TR 33.848 v0.7.0 | BT plc | approved |  |  |
| S3-211340 | Administration of the virtualisation fabric | NCSC | approved | S3-210829 | - |
| S3-211341 | Update on Ki#27 Image Snapshot and VNF Mobility. | Nokia, Nokia Shanghai Bell | approved | S3-210839 | - |
| S3-211342 | New Solution for User Consent for Exposure of information to Edge Applications in Real Time | China Unicom | approved | S3-210993 | - |
| S3-211343 | Draft TR 33.851 | Nokia | approved | - | - |
| S3-211344 | Draft TR 33.875 | Nokia | approved | - | - |
| S3-211345 | Draft TR 33.809 | Apple | approved | - | - |
| S3-211346 | Draft TR 33.854 | Qualcomm | approved | - | - |
| S3-211347 | Draft TR TR 33.857 | Ericsson | approved | - | - |

### A2: Tdoc decision timing

|  |  |  |
| --- | --- | --- |
| Document | Date/time UTC | Decision |
| S3-210810 | 05/03/2021 16:02:42 | approved |
| S3-210811 | 05/03/2021 16:02:44 | noted |
| S3-210812 | 09/03/2021 09:50:49 | available |
| S3-210813 | 08/03/2021 14:23:51 | available |
| S3-210814 | 08/03/2021 13:32:52 | available |
| S3-210815 | 09/03/2021 09:46:43 | postponed |
| S3-210816 | 08/03/2021 12:24:59 | available |
| S3-210816 | 08/03/2021 12:27:34 | postponed |
| S3-210817 | 08/03/2021 14:24:35 | available |
| S3-210818 | 08/03/2021 10:59:06 | postponed |
| S3-210819 | 08/03/2021 12:42:05 | noted |
| S3-210820 | 08/03/2021 12:51:46 | noted |
| S3-210821 | 08/03/2021 12:51:47 | noted |
| S3-210823 | 08/03/2021 12:43:57 | noted |
| S3-210824 | 08/03/2021 12:51:55 | noted |
| S3-210827 | 08/03/2021 13:05:41 | approved |
| S3-210829 | 08/03/2021 10:53:28 | revised |
| S3-210836 | 08/03/2021 12:24:05 | noted |
| S3-210837 | 08/03/2021 12:24:05 | noted |
| S3-210838 | 08/03/2021 12:24:06 | noted |
| S3-210839 | 08/03/2021 10:57:16 | revised |
| S3-210842 | 08/03/2021 11:06:59 | approved |
| S3-210844 | 08/03/2021 11:03:49 | approved |
| S3-210846 | 08/03/2021 10:59:26 | noted |
| S3-210849 | 08/03/2021 11:07:12 | noted |
| S3-210850 | 08/03/2021 13:06:02 | approved |
| S3-210851 | 08/03/2021 11:04:10 | available |
| S3-210854 | 08/03/2021 11:04:22 | noted |
| S3-210855 | 08/03/2021 12:27:55 | noted |
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| S3-210862 | 09/03/2021 09:50:00 | noted |
| S3-210863 | 09/03/2021 09:49:45 | noted |
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| S3-210865 | 08/03/2021 12:48:27 | noted |
| S3-210870 | 08/03/2021 12:28:57 | approved |
| S3-210871 | 08/03/2021 12:28:58 | approved |
| S3-210873 | 08/03/2021 14:29:43 | approved |
| S3-210874 | 08/03/2021 13:06:30 | noted |
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| S3-210878 | 08/03/2021 11:06:51 | approved |
| S3-210879 | 08/03/2021 11:04:29 | approved |
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| S3-210881 | 08/03/2021 12:29:07 | noted |
| S3-210882 | 08/03/2021 12:29:12 | noted |
| S3-210883 | 08/03/2021 12:36:48 | available |
| S3-210887 | 08/03/2021 14:04:20 | noted |
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| S3-210890 | 08/03/2021 16:12:28 | noted |
| S3-210894 | 08/03/2021 13:07:12 | approved |
| S3-210895 | 08/03/2021 12:48:36 | approved |
| S3-210896 | 08/03/2021 12:16:03 | approved |
| S3-210898 | 08/03/2021 12:23:53 | noted |
| S3-210900 | 08/03/2021 10:48:43 | noted |
| S3-210901 | 08/03/2021 16:07:32 | noted |
| S3-210902 | 08/03/2021 14:26:58 | approved |
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| S3-210904 | 08/03/2021 16:06:53 | approved |
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| S3-210907 | 08/03/2021 14:04:42 | noted |
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| S3-210921 | 08/03/2021 13:07:28 | noted |
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| S3-210928 | 09/03/2021 09:48:04 | noted |
| S3-210930 | 08/03/2021 12:32:24 | approved |
| S3-210931 | 08/03/2021 12:29:34 | approved |
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| S3-210935 | 08/03/2021 14:02:11 | approved |
| S3-210936 | 08/03/2021 10:45:25 | noted |
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| S3-210945 | 08/03/2021 10:46:21 | approved |
| S3-210946 | 08/03/2021 10:47:29 | noted |
| S3-210947 | 08/03/2021 10:47:29 | noted |
| S3-210948 | 08/03/2021 10:47:30 | noted |
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| S3-210951 | 08/03/2021 16:07:23 | noted |
| S3-210954 | 08/03/2021 14:22:56 | noted |
| S3-210956 | 08/03/2021 14:02:54 | noted |
| S3-210958 | 08/03/2021 16:13:37 | available |
| S3-210960 | 09/03/2021 09:44:23 | available |
| S3-210961 | 09/03/2021 09:44:40 | approved |
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| S3-210965 | 08/03/2021 14:02:44 | noted |
| S3-210966 | 09/03/2021 09:53:08 | noted |
| S3-210967 | 09/03/2021 09:52:28 | noted |
| S3-210968 | 09/03/2021 09:51:53 | noted |
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| S3-210971 | 08/03/2021 12:37:16 | noted |
| S3-210974 | 08/03/2021 12:33:43 | noted |
| S3-210978 | 08/03/2021 12:30:02 | noted |
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| S3-210985 | 08/03/2021 14:06:19 | noted |
| S3-210987 | 09/03/2021 10:01:34 | noted |
| S3-210989 | 09/03/2021 10:01:50 | noted |
| S3-210993 | 08/03/2021 14:32:15 | revised |
| S3-210996 | 08/03/2021 14:23:16 | withdrawn |
| S3-210997 | 08/03/2021 14:07:26 | noted |
| S3-210998 | 08/03/2021 13:31:46 | withdrawn |
| S3-211001 | 08/03/2021 13:31:13 | approved |
| S3-211003 | 08/03/2021 13:29:05 | approved |
| S3-211004 | 08/03/2021 14:05:02 | noted |
| S3-211005 | 08/03/2021 14:06:29 | noted |
| S3-211005 | 08/03/2021 14:06:39 | approved |
| S3-211006 | 08/03/2021 14:06:41 | noted |
| S3-211008 | 08/03/2021 14:05:24 | noted |
| S3-211012 | 08/03/2021 16:09:27 | available |
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| S3-211014 | 08/03/2021 10:48:15 | noted |
| S3-211015 | 08/03/2021 10:48:16 | noted |
| S3-211016 | 08/03/2021 10:48:25 | noted |
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| S3-211024 | 08/03/2021 14:05:11 | noted |
| S3-211026 | 08/03/2021 11:03:21 | approved |
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| S3-211069 | 08/03/2021 14:01:15 | approved |
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| S3-211075 | 08/03/2021 14:22:38 | noted |
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| S3-211079 | 08/03/2021 13:31:24 | approved |
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| S3-211148 | 08/03/2021 11:01:34 | noted |
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| S3-211162 | 09/03/2021 09:55:57 | noted |
| S3-211163 | 09/03/2021 09:55:36 | noted |
| S3-211164 | 09/03/2021 09:51:42 | noted |
| S3-211165 | 09/03/2021 09:55:46 | noted |
| S3-211167 | 08/03/2021 10:49:18 | noted |
| S3-211169 | 08/03/2021 10:49:30 | approved |
| S3-211171 | 05/03/2021 16:03:01 | noted |
| S3-211172 | 08/03/2021 12:41:17 | postponed |
| S3-211173 | 09/03/2021 09:42:27 | noted |
| S3-211174 | 08/03/2021 13:06:14 | approved |
| S3-211175 | 08/03/2021 13:06:21 | approved |
| S3-211176 | 08/03/2021 12:37:40 | approved |
| S3-211177 | 08/03/2021 10:59:20 | approved |
| S3-211178 | 08/03/2021 10:59:37 | approved |
| S3-211179 | 08/03/2021 13:05:49 | approved |
| S3-211181 | 08/03/2021 11:03:38 | approved |
| S3-211182 | 08/03/2021 11:06:21 | approved |
| S3-211183 | 08/03/2021 11:06:31 | approved |
| S3-211184 | 08/03/2021 11:11:10 | approved |
| S3-211185 | 08/03/2021 13:05:54 | approved |
| S3-211186 | 12/03/2021 10:02:00 | approved |
| S3-211187 | 08/03/2021 14:05:44 | approved |
| S3-211188 | 08/03/2021 13:45:41 | approved |
| S3-211189 | 08/03/2021 10:48:48 | approved |
| S3-211190 | 08/03/2021 10:48:58 | approved |
| S3-211191 | 08/03/2021 10:49:10 | approved |
| S3-211192 | 08/03/2021 10:49:24 | approved |
| S3-211193 | 08/03/2021 16:07:07 | approved |
| S3-211194 | 09/03/2021 09:44:57 | approved |
| S3-211195 | 09/03/2021 09:44:59 | approved |
| S3-211196 | 09/03/2021 09:45:02 | approved |
| S3-211197 | 08/03/2021 13:45:30 | approved |
| S3-211198 | 08/03/2021 13:10:39 | approved |
| S3-211199 | 08/03/2021 13:10:43 | approved |
| S3-211200 | 08/03/2021 16:07:44 | approved |
| S3-211201 | 08/03/2021 16:07:57 | noted |
| S3-211201 | 08/03/2021 16:10:15 | approved |
| S3-211202 | 08/03/2021 13:06:41 | approved |
| S3-211203 | 08/03/2021 13:06:45 | approved |
| S3-211204 | 09/03/2021 09:50:38 | approved |
| S3-211205 | 09/03/2021 09:54:57 | approved |
| S3-211206 | 08/03/2021 14:06:56 | approved |
| S3-211207 | 08/03/2021 16:09:47 | approved |
| S3-211208 | 08/03/2021 11:01:13 | approved |
| S3-211209 | 08/03/2021 16:08:45 | approved |
| S3-211210 | 08/03/2021 11:02:54 | approved |
| S3-211211 | 08/03/2021 11:08:01 | approved |
| S3-211212 | 08/03/2021 12:20:14 | approved |
| S3-211213 | 08/03/2021 11:01:44 | approved |
| S3-211214 | 08/03/2021 14:28:05 | withdrawn |
| S3-211215 | 08/03/2021 13:30:20 | approved |
| S3-211216 | 08/03/2021 13:27:58 | approved |
| S3-211217 | 09/03/2021 11:27:06 | approved |
| S3-211218 | 09/03/2021 11:27:07 | approved |
| S3-211219 | 09/03/2021 09:22:10 | withdrawn |
| S3-211220 | 09/03/2021 11:27:12 | approved |
| S3-211221 | 09/03/2021 11:27:13 | approved |
| S3-211222 | 08/03/2021 12:31:09 | approved |
| S3-211223 | 09/03/2021 11:27:14 | approved |
| S3-211224 | 09/03/2021 11:27:19 | approved |
| S3-211225 | 09/03/2021 11:27:20 | approved |
| S3-211226 | 09/03/2021 09:42:51 | approved |
| S3-211227 | 09/03/2021 09:43:03 | approved |
| S3-211228 | 09/03/2021 09:43:04 | approved |
| S3-211229 | 08/03/2021 13:10:07 | approved |
| S3-211230 | 08/03/2021 13:10:12 | approved |
| S3-211231 | 09/03/2021 09:53:58 | approved |
| S3-211232 | 08/03/2021 12:30:48 | approved |
| S3-211233 | 08/03/2021 14:03:14 | approved |
| S3-211234 | 08/03/2021 16:09:03 | approved |
| S3-211235 | 08/03/2021 10:44:50 | approved |
| S3-211236 | 08/03/2021 11:01:50 | approved |
| S3-211237 | 08/03/2021 16:11:21 | approved |
| S3-211238 | 08/03/2021 16:11:33 | noted |
| S3-211239 | 08/03/2021 16:10:49 | approved |
| S3-211240 | 08/03/2021 13:05:25 | approved |
| S3-211241 | 08/03/2021 16:08:34 | approved |
| S3-211242 | 08/03/2021 13:05:33 | approved |
| S3-211243 | 08/03/2021 13:30:02 | approved |
| S3-211244 | 08/03/2021 14:05:33 | approved |
| S3-211245 | 09/03/2021 09:44:09 | approved |
| S3-211246 | 08/03/2021 13:31:31 | approved |
| S3-211247 | 09/03/2021 09:45:23 | approved |
| S3-211248 | 09/03/2021 09:46:17 | approved |
| S3-211249 | 08/03/2021 12:20:27 | approved |
| S3-211250 | 08/03/2021 12:22:43 | approved |
| S3-211251 | 08/03/2021 11:11:56 | approved |
| S3-211252 | 08/03/2021 11:12:03 | approved |
| S3-211253 | 08/03/2021 12:22:54 | approved |
| S3-211254 | 08/03/2021 12:23:01 | approved |
| S3-211255 | 08/03/2021 12:23:07 | approved |
| S3-211256 | 08/03/2021 12:23:14 | approved |
| S3-211257 | 08/03/2021 10:45:58 | approved |
| S3-211258 | 08/03/2021 13:10:53 | approved |
| S3-211259 | 08/03/2021 14:03:22 | approved |
| S3-211260 | 08/03/2021 14:07:16 | approved |
| S3-211261 | 08/03/2021 09:35:13 | approved |
| S3-211262 | 08/03/2021 12:16:28 | approved |
| S3-211263 | 08/03/2021 12:16:29 | approved |
| S3-211264 | 09/03/2021 10:01:43 | approved |
| S3-211265 | 09/03/2021 11:37:25 | approved |
| S3-211266 | 09/03/2021 10:01:19 | approved |
| S3-211267 | 08/03/2021 14:28:58 | approved |
| S3-211268 | 08/03/2021 12:28:41 | approved |
| S3-211269 | 08/03/2021 12:28:46 | approved |
| S3-211270 | 08/03/2021 14:01:59 | approved |
| S3-211271 | 08/03/2021 14:02:05 | approved |
| S3-211272 | 08/03/2021 13:08:43 | approved |
| S3-211273 | 08/03/2021 13:08:53 | approved |
| S3-211274 | 13/03/2021 09:08:59 | approved |
| S3-211275 | 09/03/2021 09:48:57 | approved |
| S3-211276 | 09/03/2021 09:48:44 | noted |
| S3-211276 | 09/03/2021 09:48:46 | approved |
| S3-211277 | 09/03/2021 09:49:10 | approved |
| S3-211278 | 08/03/2021 13:33:37 | approved |
| S3-211279 | 09/03/2021 09:45:57 | approved |
| S3-211280 | 09/03/2021 09:49:33 | approved |
| S3-211281 | 08/03/2021 12:29:50 | approved |
| S3-211282 | 08/03/2021 12:32:37 | approved |
| S3-211283 | 08/03/2021 14:06:10 | approved |
| S3-211284 | 13/03/2021 09:09:05 | approved |
| S3-211285 | 08/03/2021 16:13:50 | approved |
| S3-211286 | 09/03/2021 09:46:05 | approved |
| S3-211287 | 12/03/2021 10:02:07 | approved |
| S3-211288 | 12/03/2021 10:02:13 | approved |
| S3-211289 | 08/03/2021 13:09:39 | approved |
| S3-211290 | 08/03/2021 13:09:43 | approved |
| S3-211291 | 08/03/2021 13:09:15 | approved |
| S3-211292 | 08/03/2021 13:09:31 | approved |
| S3-211293 | 15/03/2021 07:37:49 | approved |
| S3-211294 | 08/03/2021 13:45:05 | approved |
| S3-211295 | 08/03/2021 13:06:54 | approved |
| S3-211296 | 08/03/2021 13:07:00 | approved |
| S3-211297 | 08/03/2021 13:07:05 | approved |
| S3-211298 | 08/03/2021 13:07:21 | approved |
| S3-211299 | 08/03/2021 10:48:37 | approved |
| S3-211300 | 08/03/2021 16:06:45 | approved |
| S3-211301 | 08/03/2021 14:03:03 | approved |
| S3-211302 | 08/03/2021 14:06:00 | approved |
| S3-211303 | 08/03/2021 16:10:37 | approved |
| S3-211304 | 08/03/2021 11:03:06 | approved |
| S3-211305 | 08/03/2021 11:03:11 | approved |
| S3-211306 | 08/03/2021 13:29:20 | approved |
| S3-211307 | 08/03/2021 13:33:50 | approved |
| S3-211308 | 08/03/2021 13:45:54 | approved |
| S3-211309 | 08/03/2021 13:07:35 | approved |
| S3-211310 | 08/03/2021 13:08:19 | approved |
| S3-211311 | 08/03/2021 13:08:25 | approved |
| S3-211312 | 08/03/2021 13:08:30 | approved |
| S3-211313 | 08/03/2021 13:32:40 | approved |
| S3-211314 | 08/03/2021 14:22:49 | approved |
| S3-211315 | 08/03/2021 16:12:51 | approved |
| S3-211316 | 09/03/2021 11:18:10 | approved |
| S3-211317 | 08/03/2021 14:02:20 | approved |
| S3-211318 | 08/03/2021 12:36:20 | approved |
| S3-211319 | 08/03/2021 12:37:24 | approved |
| S3-211320 | 08/03/2021 12:37:27 | approved |
| S3-211321 | 15/03/2021 07:37:43 | approved |
| S3-211322 | 12/03/2021 07:39:40 | approved |
| S3-211323 | 12/03/2021 07:39:45 | approved |
| S3-211324 | 08/03/2021 11:02:28 | approved |
| S3-211325 | 12/03/2021 07:39:34 | approved |
| S3-211326 | 08/03/2021 12:29:24 | approved |
| S3-211327 | 08/03/2021 12:31:20 | approved |
| S3-211328 | 08/03/2021 13:09:58 | approved |
| S3-211329 | 08/03/2021 09:34:55 | approved |
| S3-211330 | 08/03/2021 14:26:13 | approved |
| S3-211331 | 08/03/2021 12:16:41 | approved |
| S3-211332 | 15/03/2021 08:36:36 | approved |
| S3-211333 | 08/03/2021 12:16:42 | approved |
| S3-211334 | 08/03/2021 16:12:58 | approved |
| S3-211335 | 08/03/2021 16:13:08 | approved |
| S3-211336 | 08/03/2021 11:14:16 | approved |
| S3-211337 | 08/03/2021 12:36:02 | approved |
| S3-211338 | 08/03/2021 14:25:27 | approved |
| S3-211339 | 13/03/2021 09:08:53 | approved |
| S3-211340 | 08/03/2021 12:05:10 | approved |
| S3-211341 | 08/03/2021 12:05:12 | approved |
| S3-211342 | 08/03/2021 15:53:19 | approved |
| S3-211343 | 12/03/2021 17:36:32 | approved |
| S3-211344 | 12/03/2021 17:36:38 | approved |
| S3-211345 | 12/03/2021 07:39:28 | approved |
| S3-211346 | 15/03/2021 08:22:19 | approved |
| S3-211347 | 15/03/2021 07:37:55 | approved |

## Annex B: Lists of liaisons

### B1: Incoming liaison statements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Document | Original | Title | From | Decision | Reply TDoc |
| S3-210812 |  | LS on Identification of source PLMN-ID in SBA | C4-210249 | replied to | S3-211204 |
| S3-210813 |  | Reply LS on the user consent for trace reporting | R2-2010894 | replied to | S3-211338 |
| S3-210814 |  | Reply LS on 5MBS progress and issues to address | R2-2102480 | replied to | S3-211313 |
| S3-210815 |  | LS on using MOBIKE in Integrated Access and Backhaul system | R3-211297 | postponed | (none) |
| S3-210816 |  | Reply LS on IP address to GPSI translation | S2-2009339 | postponed | ???? |
| S3-210817 |  | LS on propagation of user consent related information during Xn inter-PLMN handover | R3-204378 | replied to | S3-211330 |
| S3-210818 |  | Reply to LS on Resynchronisations | ETSI SAGE | postponed | (none) |
| S3-210819 |  | LS on Security Requirements for Sidelink/PC5 Relays | S2-2004750 | noted | (none) |
| S3-211172 |  | Reply LS on IP address to GPSI translation | S2-2101307 | postponed | (none) |

### B2: Outgoing liaison statements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Document | Title | To | Cc | reply to i/c LS |
| S3-211204 | Reply-LS on Identification of source PLMN-ID in SBA | CT4 | GSMA 5GJA | S3-210812 |
| S3-211231 | LS on end-to-end protection of HTTP message for Indirect communication | CT4 | - |  |
| S3-211313 | Reply LS on 5MBS progress and issues to address | RAN2 | SA2, SA4, RAN3 | S3-210814 |
| S3-211330 | Reply LS on propagation of user consent related information during Xn inter-PLMN handover | RAN3 | RAN2, SA5 | S3-210817 |
| S3-211338 | Reply LS on the user consent for trace reporting | RAN2, SA5 | RAN3 | S3-210813 |

## Annex C: List of draft Technical Specifications and Reports

|  |  |  |  |
| --- | --- | --- | --- |
| Document | Spec | vers | Doc title |
| S3-211186 | 33.853 | 1.5.0 | TR 33.853 v1.5.0 |
| S3-211274 | 33.847 | 0.5.0 | Draft TR 33.847 v0.5.0 Study on Security Aspects of Enhancement for Proximity Based Services in 5GS |
| S3-211284 | 33.873 | 0.3.0 | draft TR Study on the security of the system enablers for devices having multiple Universal Subscriber Identity Modules |
| S3-211287 | 33.846 | 0.11.0 | Draft TR 33.846 v0.11.0 Study on authentication enhancements in the 5G System (5GS) |
| S3-211288 | 33.864 | 0.4.0 | Draft TR 33.864 v0.4.0 Study on the security of Access and Mobility Management Function (AMF) re-allocation |
| S3-211293 | 33.850 | 0.5.0 | Draft TR 33.850 |
| S3-211321 | 33.839 | 0.5.0 | TR 33.839 v0.5.0 |
| S3-211322 | 33.866 | 0.4.0 | draft TR 33.866 0.4.0 |
| S3-211323 | 33.862 | 0.4.0 | draft TR 33.862 0.4.0 |
| S3-211325 | 33.818 | 0.11.0 | TR 33.818 v0.11.0 |
| S3-211332 | 33.867 | 0.4.0 | TR 33.867 |
| S3-211339 | 33.848 | 0.7.0 | TR 33.848 v0.7.0 |
| S3-211343 | 33.851 | 0.5.0 | Draft TR 33.851 |
| S3-211344 | 33.875 | 0.2.0 | Draft TR 33.875 |
| S3-211345 | 33.809 | 0.14.0 | Draft TR 33.809 |
| S3-211346 | 33.854 | 0.5.0 | Draft TR 33.854 |
| S3-211347 | 33.857 | 0.5.0 | Draft TR TR 33.857 |

## Annex D: List of participants

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TITLE | Family Name | Given Name | Employer Organization | Organization Represented |
| Mr. | Ashton | Tim | National Technical Assistance | National Technical Assistance |
| Dr. | Baboescu | Florin | BROADCOM CORPORATION | BROADCOM CORPORATION |
| Dr. | Baskaran | Sheeba Backia Mary | Motorola Mobility Germany GmbH | Motorola Mobility Germany GmbH |
| Dr. | Ben Henda | Noamen | Ericsson LM | Ericsson LM |
| Ms. | Bi | Xiaoyu | CATT | CATT |
| Mr. | Bjerrum | Bo Holm | Nokia Corporation | Nokia Corporation |
| Mr. | Brusilovsky | Alec | InterDigital, Inc. | InterDigital, Inc. |
| Mr. | Cano Soveri | Mirko | ETSI | ETSI |
| Mr. | Canterbury | Mark | Tencastle Limited | National Technical Assistance |
| Ms. | Carducci | Candace | Johns Hopkins University APL | Johns Hopkins University APL |
| Mr. | Castagno | Mauro | TELECOM ITALIA S.p.A. | TELECOM ITALIA S.p.A. |
| Mr. | Champel | Mary-Luc | Beijing Xiaomi Mobile Software | Beijing Xiaomi Electronics |
| Mr. | Choi | Hongjin | Samsung R&D Institute UK | Harman GmbH |
| Mr. | Choyi | Vinod Kumar | Verizon UK Ltd | Verizon Denmark |
| Mr. | Cichonski | Jeffrey | NIST | NIST |
| Ms. | Comak | Pinar | Ericsson LM | Ericsson LM |
| Dr. | Corbett | Cherita | Johns Hopkins University APL | Johns Hopkins University APL |
| Mrs. | Costa | Luciana | TELECOM ITALIA S.p.A. | TELECOM ITALIA S.p.A. |
| Mrs. | Das | Shashi | Lockheed Martin | Lockheed Martin |
| Mr. | Dees | Walter | Philips International B.V. | Philips International B.V. |
| Ms. | Deng | Juan | HuaWei Technologies Co., Ltd | Huawei Technologies Sweden AB |
| Mr. | Doerr | Johannes | BMWi | BMWi |
| Mr. | Dolly | Martin | AT&T | AT&T |
| Mr. | Eisenschmid | Michael | ZITiS | ZITiS |
| Mr. | Ennesser | Francois | Huawei Technologies France | Huawei Technologies France |
| Dr. | Escott | Adrian | Qualcomm CDMA Technologies | Qualcomm Austria RFFE GmbH |
| Mr. | Everett | Jared | Johns Hopkins University APL | Johns Hopkins University APL |
| Dr. | Falk | Rainer | Siemens AG | Siemens AG |
| Mr. | Ferdi | Samir | InterDigital, Inc. | InterDigital, Europe, Ltd. |
| Mr. | Gabay | David | MITRE Corporation | MITRE Corporation |
| Ing. | Gallo | Luigi | TELECOM ITALIA S.p.A. | TELECOM ITALIA S.p.A. |
| Mr. | Gamishev | Todor | Orange | Orange Spain |
| Dr. | Gao | Feng | China Unicom | China Unicom |
| Dr. | Garcia-Morchon | Oscar | Philips International B.V. | Philips International B.V. |
| Mr. | Goldberg | Martin | U.S. Department of Defense | U.S. Department of Defense |
| Mr. | Goldberg | Martin | U.S. National Security Agency | U.S. National Security Agency |
| Mr. | Grewal | Rajpreet Singh | NTIA | NTIA |
| Ms. | Guo | Ivy | Apple Computer Trading Co. Ltd | Apple Computer Trading Co. Ltd |
| Mr. | Guo | Longhua | HUAWEI TECH. GmbH | Huawei Tech.(UK) Co.. Ltd |
| Mr. | Gustafsson | Sune | Ericsson LM | Ericsson LM |
| Mr. | Hanhisalo | Markus | Ericsson LM | Ericsson LM |
| Mr. | Hoffpauir | Dusty | Charter Communications, Inc | Charter Communications, Inc |
| Mr. | Hu | Li | HUAWEI TECHNOLOGIES Co. Ltd. | Huawei Telecommunication India |
| Miss | Jerichow | Anja | Nokia Germany | Nokia UK |
| Dr. | Jost | Christine | Ericsson LM | Ericsson LM |
| Mr. | Kalfa | Joseph | OTD | OTD |
| Dr. | Karakoc | Ferhat | Ericsson LM | Ericsson LM |
| Dr. | Keesmaat | Iko | TNO | KPN N.V. |
| Mr. | Kenyon | Bradley | Hewlett-Packard Enterprise | Hewlett-Packard Enterprise |
| Mr. | Kim | Dongjoo | LG Electronics Inc. | LG Electronics Inc. |
| Dr. | Kim | Hongil | Qualcomm Incorporated | Qualcomm Incorporated |
| Dr. | Kim | Joonwoong | SK Telecom | SK Telecom |
| Mr. | Kolekar | Abhijeet | Intel Corporation (UK) Ltd | Intel Deutschland GmbH |
| Ms. | Koser | Elizabeth | U.S. Department of Defense | U.S. Department of Defense |
| Dr. | Kunz | Andreas | Motorola Mobility Germany GmbH | Motorola Mobility Germany GmbH |
| Mr. | Leadbeater | Alex | BT plc | BT plc |
| Dr. | Lee | Soo Bum | Qualcomm Incorporated | Qualcomm Incorporated |
| Mr. | Lee | Xiaoyang | CISA ECD | CISA ECD |
| Dr. | Lei | Ao | HUAWEI TECHNOLOGIES Co. Ltd. | HUAWEI Technologies Japan K.K. |
| Mr. | Lei | Yu | Beijing Xiaomi Mobile Software | Xiaomi Communications |
| Dr. | Lei | Zander (Zhongding) | HuaWei Technologies Co., Ltd | HUAWEI TECHNOLOGIES Co. Ltd. |
| Mr. | Li | He | HUAWEI TECHNOLOGIES Co. Ltd. | Huawei Technologies France |
| Mr. | Li | Michael | Ericsson LM | Ericsson LM |
| Mr. | Libunao | Gerardo | Verizon UK Ltd | Verizon UK Ltd |
| Mr. | lin | hao | Guangdong OPPO Mobile Telecom. | Orope Germany GmbH |
| Mr. | Liu | Chang | China Mobile Research Inst. | China Mobile E-Commerce Co. |
| Mr. | LIU | Jianning(Carry) | Beijing Xiaomi Mobile Software | Beijing Xiaomi Mobile Software |
| Mr. | Liu | Yuze | ZTE Corporation | ZTE Corporation |
| Mr. | Loushine | Mike | AT&T | AT&T |
| Mr. | Lu | Chengsui | Alibaba (China) Group., Ltd. | Alibaba (China) Group., Ltd. |
| Ms. | Lu | Wei | Xiaomi Technology | Xiaomi Technology |
| Mr. | Luft | Achim | IPCom GmbH & Co.KG | IPCom GmbH & Co.KG |
| Mr. | M Dhanasekaran | Ranga | Nokia Germany | Nokia Hungary |
| Mr. | Manganahalli Jayaprakash | Sandesh | TNO | TNO |
| Mr. | Mayer | Georg | HuaWei Technologies Co., Ltd | HUAWEI TECHNOLOGIES Co. Ltd. |
| Dr. | Muhanna | Ahmad | Mavenir | Mavenir |
| Mr. | Nair | Suresh | Nokia Germany | Nokia Japan |
| Mr. | Nakarmi | Prajwol Kumar | Ericsson Limited | Ericsson France S.A.S |
| Mr. | O'Driscoll | James | NCSC | NCSC |
| Mr. | Palanigounder | Anand | Qualcomm Technologies Int | Qualcomm Incorporated |
| Ms. | Parambath Sasi | NIvedya | Samsung R&D Institute India | Samsung R&D Institute India |
| Mr. | Pätzold | Thomas | Deutsche Telekom AG | Deutsche Telekom AG |
| Mr. | PENG | Jin | ZTE Corporation | ZTE Corporation |
| Mr. | PINTO | BARUCH | Allot Ltd | Allot Ltd |
| Mr. | Qi | Minpeng | China Mobile Com. Corporation | China Mobile Com. Corporation |
| Mr. | Qi | Yang | Qihoo 360 | Qihoo 360 |
| Mr. | Rajadurai | Rajavelsamy | Samsung R&D Institute UK | Samsung Electronics Co., Ltd |
| Ms. | Rajendran | Rohini | Samsung R&D Institute India | SAMSUNG R&D INSTITUTE JAPAN |
| Mrs. | Rong | Wu | HUAWEI TECHNOLOGIES Co. Ltd. | Huawei Device Co., Ltd |
| Ing. | Sánchez | Antonio | KEYSIGHT TECHNOLOGIES | KEYSIGHT TECHNOLOGIES |
| Mr. | Schumacher | Greg | T-Mobile USA | T-Mobile USA |
| Ms. | Shen | Yang | Beijing Xiaomi Mobile Software | Beijing Xiaomi Mobile Software |
| Mr. | Smith | Brian | Bell Mobility | Bell Mobility |
| Ms. | So | Tricci | OPPO | Guangdong OPPO Mobile Telecom. |
| Dr. | Son | Jungje | Samsung R&D Institute UK | Samsung Electronics Czech |
| Dr. | Staufer | Markus | Nokia Germany | Nokia Belgium |
| Mr. | Syrett | Mark | Hewlett-Packard Enterprise | Hewlett-Packard Enterprise |
| Mr. | Tiwari | Kundan | NEC Corporation | NEC Corporation |
| Mr. | Torrecilla | Joaquin | Keysight Technologies UK Ltd | Keysight Technologies UK Ltd |
| Ms. | Trakinat | Jean | T-Mobile USA Inc. | T-Mobile USA Inc. |
| Mr. | Trygar | Tobey | Perspecta Labs Inc. | Perspecta Labs Inc. |
| Dr. | Tsiatsis | Vlasios | Ericsson LM | Ericsson Hungary Ltd |
| Mrs. | Vahidi | Helena | Ericsson LM | Ericsson LM |
| Mr. | Vujcic | Dragan | IDEMIA | IDEMIA |
| Dr. | Wan | Tao | CableLabs | CableLabs |
| Dr. | Wang | Dan | IPLOOK | IPLOOK |
| Mr. | Whorlow | Colin | NCSC | HOME OFFICE |
| Ms. | Wifvesson | Monica | Ericsson LM | Ericsson LM |
| Mr. | Wong | Marcus | Futurewei | Futurewei Technologies |
| Mr. | Woodward | Tim | Motorola Solutions Danmark A/S | Motorola Solutions Danmark A/S |
| Ms. | WU | Jinhua | Beijing Xiaomi Mobile Software | Beijing Xiaomi Mobile Software |
| Miss | Wu | Yizhuang | HUAWEI TECHNOLOGIES Co. Ltd. | HiSilicon Technologies Co. Ltd |
| Ms. | Xing | Zhen | ZTE Corporation | ZTE Corporation |
| Mr. | Xu | Yang | Guangdong OPPO Mobile Telecom. | Guangdong OPPO Mobile Telecom. |
| Miss | Yang | Haorui | Beijing OPPO Com. corp., ltd | Beijing OPPO Com. corp., ltd |
| Mr. | Yang | Yunsong | Futurewei | Futurewei Technologies |
| Mr. | You | Shilin | ZTE Corporation | ZTE Corporation |
| Dr. | Yu | Xiaobo | Alibaba (China) Group., Ltd. | Alibaba (China) Group., Ltd. |
| Dr. | Zhang | Bo | HUAWEI TECHNOLOGIES Co. Ltd. | HuaWei Technologies Co., Ltd |
| Mr. | Zhou | Wei | CATT | CATT |
| Mr. | Zhu | Chunhui | Spreadtrum Communications | Spreadtrum Communications |
| Dr. | Zugenmaier | Alf | NTT DOCOMO INC. | NTT DOCOMO INC. |

## Annex E: List of future meetings

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| --- | --- | --- | --- | --- | --- |
| Title | Start date | End date (OP) | Town | Country | Reference |
| SA3#104e | 16/08/2021 | 27/08/2021 | Electronic | Online |  |
| SA3#105e | 08/11/2021 | 12/11/2021 | Electronic | Online |  |