3GPP TSG-SA3 6G Workshop

Conference Calls, 6 - 7 August 2025

**Source: Nokia**

**Title: 6G System SID WT**

**Document for: Discussion**

**Agenda Item: 6G Workshop**

# 1 Decision/action requested

***This discussion paper provides background and initial thoughts on the 6G work task.***

# 2 References

[1] 3GPP TS 33.501: "Security architecture and procedures for 5G System"

[2] SP-250806 - Study on Architecture for 6G System.

[3] 3GPP TR 22.870 Study on 6G Use Cases and Service Requirements.

[4] RP-251881 - New SID: Study on 6G Radio.

# 3 Rationale

We are proposing a Nokia view on the 6G System SID and its work tasks.

# 4 Detailed proposal

## 4.1 Security Area in 6G System SID

We are proposing 4 Security area in the 6G System SID.

|  |  |
| --- | --- |
| Security Area | Examples of topic covered |
| RAN Security | AS security, Lower layer Securit, Any other RAN architecture level security, N2 Security etc |
| UE to CN and Interworking | NAS security, Authentication, Interworking etc |
| NDS Security | SBA, Data Security, Exposure Security, AI Security |
| Inter-PLMN security | Roaming enhancement |

Note: KIs for NTN, Sensing etc are mapped to these security areas based on the nature of the KI.

**Proposal 1**: All new KIs should fall under these 4 security areas. Rapporteur/moderator will decide where to keep the KIs **before** the meeting.

**Proposal 2**: Idea of these security areas is to conveniently organize the contributions into appropriate session during the meeting.

## 4.2 6G System Security SID

**Security Area 1: RAN Security:**

WT-1: Study the security and privacy aspects of radio lower layers

* How to protect MAC layer, in particular MAC CE.
* How to secure Message 5.
* How to secure SIBs.

WT-2: Security aspect of 256 algorithm and AEAD details

NOTE: There is already an endorsed SID on 256+AEAD, that can be merged here to avoid overlapping issues.

WT-3: Study the security and privacy aspects of new 6G RAN architecture changes.

NOTE 1: The detailed scope and conclusions of WT-3 will be coordinated and aligned with RAN(x) working group.

**Security Area 2: UE to CN and Interworking:**

WT-4: Study the primary authentication for 6G

* Whether and how primary authentication can be supported for 6G.
* Whether and how reauthentication can be supported for 6G.

WT-5: Study security aspects for new non-access stratum functionality

* Whether and how to define security and privacy of a new non-access stratum functionality.

NOTE 2: The detailed scope and conclusions of WT-5 will be coordinated and aligned with SA2.

**Security Area 3: NDS Security:**

WT-6: SBA security enhancement

- Whether and how to link authentication and authorization.

NOTE 3: The detailed scope and conclusions of WT-6 will be coordinated and aligned with SA2.

WT-7: Study on Data management.

* Whether and how to ensure security and privacy aspects of data life cycle management (collecting, storing, and processing).
* Whether and how to audit the security and privacy aspects of the data life cycle management.

NOTE 4: The detailed scope and conclusions of WT-7 will be coordinated and aligned with SA2

WT-8: Study security and privacy aspect of exposure framework.

* Whether and how to protect new requirements introduced to support a common exposure framework.

NOTE 5: The detailed scope and conclusions of WT-8 will be coordinated and aligned with SA2 and SA6.

NOTE 6: Exposure aspects of other WT will only be covered in this WT-8.

WT-9: Study User Consent enhancements

* Whether and how to support requirements for user consent in 6G.
* Whether and how to audit user consent management.

NOTE 7: Additional requirements may come from SA2 and SA6

NOTE 8: User Consent aspects of other WT will only be covered in this WT-9.

WT-10: Study security and privacy aspect of AI.

* Whether and how to ensure security and privacy aspect of AI agents and AI framework.

NOTE 9: The detailed scope and conclusions of WT-10 will be coordinated and aligned with SA2.

WT-11: Study security and privacy aspect of changes to the 3GPP system architecture proposed by SA2 and SA6.

NOTE 10: The detailed scope and conclusions of WT-11 will be coordinated and aligned with SA2 and SA6.

**Security Area 4: Roaming Security:**

WT-12: Study roaming support for 6G

- Whether and how to support end to end roaming security solution taking roaming intermediatory into account.

NOTE 11: The detailed scope and conclusions of WT-12 will be coordinated and aligned with SA2, if applicable.