**3GPP TSG-SA WG1 Meeting #98e S1-221xxx**

**Electronic Meeting, 09-19 May 2022**

**Draft Minutes of**

**3GPP TSG SA WG1   
Meeting #97e**

Electronic Meeting

14-24 February 2022

Chairman: Jose Almodovar, TNO

Meeting Secretary: Alain Sultan, ETSI/MCC

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# 1 Opening of the meeting

The meeting #97e of 3GPP SA1 took place from the 14th till the 24th of February 2022. It was an electronic meeting using conference calls and e-mail exchanges on the 3GPP SA1\_eMeet reflector.

The SA1 chair, Mr. Jose Almodóvar (KPN), announced the opening on Sunday 13th February at 11PM UTC. He then "verbally welcomed" all the delegates at the occasion of the beginning of the first conference call, on Monday 14th February 2022 at 2.30 PM UTC.

He explained that the main focusses of this meeting were to continue to present the Rel-19 Studies and to start agreeing them.

## 1.1 Guidelines e-meeting

[S1-220003](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220003.zip) from SA1 Chair, MCC: ***Guidelines for SA1#97e (e-meeting)*** (other)

***Conclusion:*** Noted

## 1.2 Agenda and scheduling

[S1-220000](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220000.zip) from SA1 Chairman: ***1st Draft Agenda for SA1#97-e*** (agenda)

***Conclusion:*** Revised to S1-220001

[S1-220001](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220001.zip) from SA1 Chairman: ***1st Draft Agenda for SA1#97-e*** (agenda)

***Discussion:*** Revision of S1-220000.

***Conclusion:*** Revised to S1-220002

[S1-220002](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220002.zip) from SA1 Chair: ***Agenda for SA1#97e with tdoc allocation*** (agenda)

***Discussion:*** The Chair explained that, whenever companies are not in position to propose one (and only one) Rapporteur, the Chair will select a Rapporteur which is not of any of the proposing companies.

***Conclusion:*** Agreed

## 1.3 IPR, antitrust and competition laws

IPR call reminder

I draw your attention to your obligations under the 3GPP Partner Organizations’ IPR policies. Every Individual Member organization is obliged to declare to the Partner Organization or Organizations of which it is a member any IPR owned by the Individual Member or any other organization which is or is likely to become essential to the work of 3GPP.

Delegates are asked to take note that they are 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.

Antitrust policy Reminder

I also draw your attention to the fact that 3GPP activities are subject to all applicable antitrust and competition laws and that compliance with said laws is therefore required of any participant of this WG meeting including the Chairman and Vice Chairman. In case of question I recommend that you contact your legal counsel.

The leadership shall conduct the present meeting with impartiality and in the interests of 3GPP.

Furthermore, I would like to remind you that timely submission of work items in advance of TSG/WG meetings is important to allow for full and fair consideration of such matters.

## 1.4 Previous SA1 meeting report

[S1-220004](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220004.zip) from ETSI: ***Draft minutes of SA1#96e*** (report)

***Conclusion:*** Revised to S1-220005

[S1-220005](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220005.zip) from ETSI: ***Minutes of SA1#96e*** (report)

***Discussion:*** Revision of S1-220004.

***Conclusion:*** Approved

## 1.5 Information for delegates

[S1-220006](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220006.zip) from ETSI MCC: ***Extract of the 3GPP Work Plan for SA1#97e*** (Work Plan)

***Conclusion:*** Noted

[S1-220174](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220174.zip) from Chair: ***Opening session remarks for SA1#97e*** (Other)

***Conclusion:*** Noted

[S1-220171](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220171.zip) from MCC: ***Proposed changes on names and acronyms for the new WIDs*** (other)

***Summary:*** Several names and acronyms are proposed to be changed as to improve overall 3GPP consistency and simplicity.

***Conclusion:*** Noted

[S1-220008](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220008.zip) from ETSI: ***MCC Guidelines on writing a CR*** (other)

***Conclusion:*** Noted

[S1-220009](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220009.zip) from SA1 Chair: ***Preparation for SA1#97e*** (other)

***Discussion:*** Document presented at the conferences all in January.

***Conclusion:*** Noted

[S1-220170](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220170.zip) from MCC: ***Guidelines on WID names and acronyms*** (Presentation)

***Conclusion:*** Noted

Other information:

Draft TR/TS to SA plenary for information: delegates are encouraged to send draft TR/TS for information as soon as there is useful content to be reviewed. Draft TR/TS can be sent to SA plenary for information more than once.

Drafting p-CRs:

All changes must be shown as revision marks against existing text in the draft TS/TR, otherwise p-CRs may be Noted

For more info: <ftp://ftp.3gpp.org/tsg_sa/WG1_Serv/Delegate_Guidelines_v10.doc>

All documents for this meeting are stored in:

https://ftp.3gpp.org/tsg\_sa/WG1\_Serv/TSGS1\_97e\_EM\_Feb2022/Docs

## 1.6 Information for rapporteurs

"Beginner's guide" for writing a new TS/TR is available at <http://www.3gpp.org/specifications-groups/delegates-corner/writing-a-new-spec>

For detailed drafting guidelines, please see TR 21.801

Rapporteurs are expected to produce a work item/study item status report for the end of the meeting under 10.2.

For draft TR/TS, the rapporteur is expected to update the draft TR/TS with all contributions agreed at the meeting before the meeting is closed.

## 1.7 Working agreements

There was no contribution for this agenda item.

# 2 Reports and action items

[S1-220007](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220007.zip) from SA1 Chairperson: ***SA1-related topics at SA#94e*** (report)

***Conclusion:*** Noted

# 3 Liaison Statements

## 3.1 LSs on Using CP-SOR as a secured information transfer mechanism

[S1-220046](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220046.zip) from C1-217163: ***LS on Using CP-SOR as a secured information transfer mechanism between HPLMN and UE*** (LS in)

***Summary:*** Steering of Roaming (SOR) is a feature that is used since GSM and the requirements are provided in TS22.011.

In 5G, Control Plane SOR solution (CP-SOR) was introduced in CT1 using the same requirements in TS22.011. In Rel-17, additional requirements specific for CP-SOR were provided in TS22.261.

In Rel-17, CP-SOR has been used not only to provide SOR information from the HPLMN to the UE, but also used by other features as a secured mechanism and tool to transfer information from the HPLMN to the UE, specifically while the UE is roaming in a different PLMN.

CT1 ask to update the requirement

***Discussion:*** See corresponding CR in S1-2200109.

No need to answer back.

***Conclusion:*** Noted

[S1-220109](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220109.zip) from Qualcomm: ***Clarification of SoR requirements*** (CR to [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) #0635 cat F v.17.9.0, [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192), WID: [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047))

***Summary:*** This is to do the change proposed by CT1.

***Discussion:*** Minor issue with the date format.

***Conclusion:*** Agreed

[S1-220110](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220110.zip) from Qualcomm: ***Clarification of SoR requirements*** (CR to [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) #0636 cat A v.18.5.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047))

***Summary:*** Mirror of previous.

***Conclusion:*** Agreed

## 3.2 LSs on MINT and Higher priority PLMN Selection

[S1-220049](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220049.zip) from C1-220816: ***LS on MINT and Higher priority PLMN Selection*** (LS in)

***Summary:*** CT1 has a few questions to SA1 in the context of Minimization of service Interruption (MINT):

1) Is the UE allowed or even mandated to scan for all available PLMNs in order to obtain service on an allowable PLMN when registered for disaster roaming service?

2) Is the UE allowed or even mandated to attempt service on such other allowable PLMNs when registered for disaster roaming service or shall the UE continue to use disaster roaming service on the FPLMN?

3) The interval of time between searches for a higher priority PLMN is configured by HPLMN. Can SA1 kindly provide the reasoning whether this interval of time needs be different/adjusted for the UE in disaster roaming condition?

***Discussion:*** See proposed answers in 83/129, with discussion papers in 84/128.

***Conclusion:*** Postponed

[S1-220083](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220083.zip) from Samsung: ***[Draft] Reply LS to CT1 on MINT and Higher priority PLMN Selection*** (LS out)

***Summary:*** This is a draft reply to LS C1-220816:

1) yes

2) yes

3) timers are defined by CT1, not by SA1

***Discussion:*** 0083r3 approval day C: Apple

Still some objections, in particular by Apple, on the last day so this is postponed to the next meeting.

***Conclusion:*** Noted

[S1-220084](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220084.zip) from Samsung: ***Concerning Reply LS on MINT and Higher priority PLMN Selection*** (discussion)

***Summary:*** This document considers the issues and proposed resolutions from incoming LS C1-220816 and the draft reply associated with this discussion paper.

***Conclusion:*** Noted

[S1-220176](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220176.zip) from Samsung: ***Clarifications on PLMN search for FPLMN Registered UEs*** (CR to **22.011 #**0333 cat F v.17.5.0, **Rel-17, WID: MINT)**

***Discussion:*** 0176r1 approval day

***Conclusion:*** Noted

b[S1-220177](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220177.zip) from Samsung: ***Clarifications on PLMN search for FPLMN Registered UEs*** (CR to **22.011 #**0334 cat A v.18.1.0, **Rel-18, WID: MINT)**

***Summary:*** Mirror of previous

***Conclusion:*** Noted

[S1-220129](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220129.zip) from Apple: ***LS to CT1 on Reply LS on MINT and Higher priority PLMN Selection*** (LS out)

***Summary:*** Proposed answers:

1) For Case 1 in relation to question 1:

As the UE is already receiving services from the Forbidden PLMN providing disaster roaming and there is no higher priority PLMN other than the PLMNs under disaster, the UE is not mandated to scan for other allowable PLMNs and the UE shall remain registered to the Forbidden PLMN.

2) For Case 2 in relation to question 2:

If the UE has performed a PLMN scan to attempt to select a higher priority PLMN and could not register to a higher priority PLMN, the UE shall remain registered to the Forbidden PLMN.

3) The purpose of the timer is to ensure that the UE moves to a higher priority PLMN and is independent of whether the UE is under disaster roaming. Therefore, the interval of time does not need to be different / adjusted.

***Discussion:*** No convergence was possible between Samsung's view in 0084 and Apple's view in 0129. The topic is postponed.

The questions are relatively independent, so a possible way forward would be to answer only some of them.

***Conclusion:*** Noted

[S1-220128](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220128.zip) from Apple: ***LS to BBF, 3GPP SA2 on MINT and Higher priority PLMN Selection*** (discussion)

***Summary:*** Proposed answer:

1) no (or up to implementation), UE is not mandated to scan for a higher priority PLMN

2) The UE shall remain on the Forbidden PLMN if the UE cannot register to higher priority PLMNs.

3) Timer value remains unchanged for disaster roaming

***Discussion:*** For Samsung, no more burden should be put on the UE.

For Apple, the main concern is not to ask the UE to perform, potentially not needed, extra network scans.When a UE is on its own PLMN, it should not make any extra scan (no national roaming allowed). Samsung agrees with this, but for the Northern hemisphere, not for the South one, where national roaming is allowed.

For Vivo, the UE should be allowed to scan. This would be useful e.g. in a case when there are only 2 PLMNs: one is in disaster and one is forbidden.

For Oppo, 1 (roaming) should be an implementation option. For 2 (home), the UE should not be able to scan, but this should also be left to implementation. So they are closer to Apple's opinion.

For Huawei, Samsung can be considered as a basis, but the scan should be optional.

There is no clear way forward at this stage. More discussions are encouraged off-line.

***Conclusion:*** Noted

## 3.3 LSs on Application Enablement for Data Integrity Verification Service in IOT

[S1-220056](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220056.zip) from S3-214337: ***LS on reply to SA6 about new SID on Application Enablement for Data Integrity Verification Service in IOT*** (LS in)

***Summary:*** SA3 asks SA1 to take into account some info on a new WID on Data integrity for IoT, to clarify intention, main use cases, scope, and main requirements of the service for data integrity verification service introduced in TS 22.261, and to provide the results as an input to SA3.

***Discussion:*** See proposed answesr in S1-220017 and in S1-220092.

***Conclusion:*** Replied in 0092r4

[S1-220017](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220017.zip) from China Unicom: ***LS to 3GPP SA3 (cc 3GPP SA6) on [Draft] of Reply LS to SA3 on Discussion on Data Integrity Service in IoT*** (LS out)

***Summary:*** The LS reply serves for SA1 to reply to LS s3-214337 of SA3. It could be with S1-220016.

The proposed answer highlights the applicable requirements in TS 22.261,

***Discussion:*** See the other proposed answer.

***Conclusion:*** Noted

[S1-220016](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220016.zip) from China Unicom: ***Discussion on Data Integrity Service in IOT of S3 LS*** (discussion)

***Summary:*** Discussion contribution for giving background information to 17.

***Conclusion:*** Noted

[S1-220092](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220092.zip) from Nokia, Nokia Shanghai Bell: ***reply LS to SA3, SA6 (cc SA) on reply to SA6 about new SID on Application Enablement for Data Integrity Verification Service in IOT*** (LS out)

***Summary:*** Also, some requirements from 22.261 are highlighted, but with the explanation that the requirement is explicitly limited to data integrity verification service applied to the data exchanged between the 5G network and a third-party service provider. Additionally, any impact to the RAN and UE are explicitly precluded by this requirement.

***Discussion:*** For Samsung, Qualcomm, Nokia's approach is preferred.

Rev4 agreed.

Huawei highlighted that the Note of 22.261 is a "could", not a "shall" as implicitely stated by Nokia.

For Oppo, whatever the answer, it should be short and limited to requirements.

There is more support for Nokia's answer but not as it is.

Nokia agreed to rephrase the last statement ("Additionally, any impact to the RAN and UE are explicitly precluded by this requirement.").

to be used as a basis for further draft.

Rev4 agreed.

***Conclusion:*** Revised to S1-220185

[S1-220185](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220185.zip) from SA1: ***LS to SA3, SA6 (cc SA) on reply to SA6 about new SID on Application Enablement for Data Integrity Verification Service in IOT*** (LS out)

***Summary:*** Revision of S1-220092

***Discussion:*** Same as 0092r4 Revision of S1-220092.

***Conclusion:*** Agreed

## 3.4 LSs on UAC enhancements and system information extensions for minimization of service interruption

[S1-220053](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220053.zip) from R2-2201841: ***Reply LS on UAC enhancements and system information extensions for minimization of service interruption*** (LS in)

***Summary:*** RAN2 ask for more clarifications on how to interpret whether MINT is supported for PNI-NPN.

***Discussion:*** Proposed answer in 91.

***Conclusion:*** Noted

[S1-220091](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220091.zip) from Lenovo [to be SA1]: ***LS to RAN2, CT1 on Draft Reply LS on support of disaster roaming by PNI-NPN with CAG*** (LS out)

***Summary:*** It is proposed to answer that, from a service requirements point of view, disaster roaming can be supported by PNI-NPN with CAG. However, considering the potential impacts to stage 3 specifications SA1 want to leave the final decision to CT1.

***Discussion:*** Nokia pointed out that the incoming LS is mainly to CT1, SA1 is only in copy, so there is no need to answer.

There is no support to send it.

***Conclusion:*** Noted

[S1-220090](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220090.zip) from Lenovo, Motorola Mobility: ***LS to RAN2; contact: Nokia) (cc SA1, SA2) on Discussion on support of disaster roaming by PNI-NPN with CAG*** (LS out)

***Conclusion:*** Noted

## 3.5 LSs on Ad hoc group communication

[S1-220058](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220058.zip) from S6-212694: ***LS on ad hoc group communication*** (LS in)

***Summary:*** Questions from SA6:

Q1: Is the Group ID required for MCX Service or an authorized MCX user to establish Ad hoc group communication? Whether the MCX Service is required to enable the MCX users participating in the Ad hoc group communication to receive the Ad hoc group related information (e.g. Group ID) prior to or during the Ad hoc group communication?

And they also ask to clarify some requirements.

***Discussion:*** Proposed answer in 0165

***Conclusion:*** Replied in 0165r3

[S1-220165](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220165.zip) from Samsung: ***LS to SA6 on [Draft] Reply LS on ad hoc group communication*** (LS out)

***Summary:*** draft LS reply for S1-220058/S6-212694

rev1 presented

Proposed answers:

1a) Ad hoc group communication is another type of group communication and so SA1 confirms that a Group ID is required for establishment of Ad hoc group communication.

1b) The MCX Service is required to enable the MCX users participating in the Ad hoc group communication to receive Ad hoc group related information including the Group ID during the Ad hoc group communication.

***Discussion:*** The extra information should be put at the end of the LS, for readability reasons.

For FirstNet, the extra information added between r0 and r1 (upon UIC's request) is not needed. Most of it is seen as stage 2 (SA6).

The answer is agreed to be made shorter.

Rev3: agreed, rev marks to be agreed.

***Conclusion:*** Revised to S1-220186

[S1-220186](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220186.zip) from SA1: ***Reply LS to SA6 on Ad hoc group communication*** (LS out)

***Summary:*** Revision of S1-220165

***Discussion:*** Same as 0165r3 Revision of S1-220165.

***Conclusion:*** Agreed

## 3.6 LSs on User Controlled PLMN Selector

[S1-220047](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220047.zip) from C1-217358: ***LS on the User Controlled PLMN Selector with Access Technology in Control plane solution for steering of roaming in 5GS*** (LS in)

***Summary:*** It is about the use case when the selected PLMN is a VPLMN which is in the "User Controlled PLMN Selector with Access Technology" list and the UE in automatic network selection mode receives SOR information, and the security check of the received SOR information fails in the UE.

CT1asks SA1 whether, in the use case above, the VPLMN still has higher priority than the steered-to-PLMN or the VPLMN should be considered as lowest priority?

***Discussion:*** Proposed answer in 0162.

***Conclusion:*** Replied in 0162r2

[S1-220162](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220162.zip) from [Qualcomm / SA1]: ***LS to CT1 (cc SA3) on [DRAFT] Reply LS on User Controlled PLMN Selector with Access*** (LS out)

***Summary:*** Proposed answer to S1-220047

C1-217358:

SA1 answer is: in the scenario above, the VPLMN should be considered as lowest priority.

***Discussion:*** For Apple and Vivo, it is not clear why the UE has to check for the SOR information.

NTT DoCoMo support Qualcomm's view.

Apple stressed that some information is encrypted and this has to be taken into account in the process.

For Mitre, the case of a 3rd party provider could also be considered.

A show of hand between :

A. The VPLMN has higher priority than the steered-to-PLMN

B. VPLMN should be considered as lowest priority

Option A: 6 (Apple, Vivo, Mitre, Intel, Futurwei, KPN)

Option B : 8 (Qualcomm, DoCoMo, Nokia< Deutsche Telekom, SyncTechno, Ericsson, InterDigital, T-Mobile US)

There is no consensus at this stage.

There was no consensus neither during off-line discussions. This is what can be answered.

Rev1: Last day: SA1 could not reach consensus to make the relevant changes to TS 22.011.

Rev2: keep only: "SA1 could not reach consensus.", add SA in cc.

Rev2 agreed

***Conclusion:*** Revised to S1-220187

[S1-220187](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220187.zip) from SA1: ***LS to CT1 (cc SA3, SA) on Reply LS on User Controlled PLMN Selector with Access Technology in Control plane solution for steering of roaming in 5GS*** (LS out)

***Summary:*** Revision of S1-220162

***Discussion:*** Same as 0162r2 Revision of S1-220162.

***Conclusion:*** Agreed

[S1-220163](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220163.zip) from Qualcomm: ***Clarification of SoR requirements*** (CR to **22.011 #**0331 cat F v.17.5.0, **Rel-17, WID: TEI17)**

***Summary:*** Goes with S1-220162

***Conclusion:*** Noted

[S1-220164](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220164.zip) from Qualcomm: ***Clarification of SoR requirements*** (CR to **22.011 #**0332 cat A v.18.1.0, **Rel-18, WID: TEI17)**

***Summary:*** Mirror of previous

***Conclusion:*** Noted

## 3.7 LSs on 5G RG requirements and its remote management

[S1-220051](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220051.zip) from BBF LIAISE-483: ***Alignment concerning 5G RG requirements and its remote management*** (LS in)

***Summary:*** BBF has concerns about a potential overlap in requirements leading to a confusion in the industry as well as a potential break of the overall interworking of the solution.

***Discussion:*** Proposed answer in 172.

Agreed to send an LS only to SA, with a short cover page to say to SA: "please review the attached LS, amend it as needed, and sent it to the external body on our behalf".

***Conclusion:*** Replied in 0172r2

[S1-220172](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220172.zip) from Deutsche Telekom : ***LS to BBF, 3GPP SA2 on LS on Alignment concerning 5G RG requirements and its remote*** (LS out)

***Summary:*** It is proposed to answer that SA1 has completed their work on PIRates by end of last year and respective requirements were included as clause 6.38 of TS 22.261.

***Discussion:*** Qualcomm has concerns about asking SA2 to liaise with BBF on specifying architecture requirements for Residential Gateways.

This will go first to the SA plenary, since SA was also in destination of the incoming LS.

So SA should be added to the "To" field.

Rev2: as proposed: now a cover LS to SA, and a second, unnumbered, draft LS to BBF.

Rev2 agreed.

***Conclusion:*** Revised to S1-220188

[S1-220188](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220188.zip) from SA1: ***LS to SA on LS on Alignment concerning 5G RG requirements and its remote management*** (LS out)

***Summary:*** Revision of S1-220172

***Discussion:*** Same as 0172r2 Revision of S1-220172.

***Conclusion:*** Agreed

## 3.8 LSs on Applications of IMT for specific societal, industrial and enterprise usages

[S1-220062](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220062.zip) from ITU / SP-211412: ***LS from ITU-R WP5D: Development of a draft new Report ITU-R M.[IMT.INDUSTRY] -Applications of IMT for specific societal, industrial and enterprise usages. To be forward to SA WG1*** (LS in)

***Summary:*** ITU informs about the development of a draft new Report ITU-R M.[IMT.INDUSTRY] –Applications of IMT for specific societal, industrial and enterprise usages

***Discussion:*** Proposed answer in 113.

Agreed to send an LS only to SA, with a short cover page to say to SA: "please review the attached LS, amend it as needed, and sent it to the external body on our behalf".

***Conclusion:*** Email Approval

[S1-220113](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220113.zip) from Qualcomm: ***Proposal for input to ITU-R on IMT-Industries*** (discussion)

***Summary:*** Rev2 presented.

This document provides an initial proposal, and suggested time-plan, on a possible SA1-driven contribution on 3GPP use cases and requirements related to industry and enterprise applications/verticals using 3GPP technologies, to be used as (3GPP) input to ITU-R WP5D for their ongoing Report.

***Discussion:*** This is also to go through SA.

***Conclusion:*** Revised to S1-220189

[S1-220189](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220189.zip) from Qualcomm: ***Proposal for input to ITU-R on IMT-Industries*** (discussion)

***Summary:*** Revision of S1-220113

***Discussion:*** Revision of S1-220113.

To be taken into account if E-mail discussion on S1-220181.

***Conclusion:*** Noted

[S1-220181](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220181.zip) from Qualcomm Incorporated: ***LS to SA on LS on Text Proposal for ITU-R draft Report ITU-R M.[IMT.INDUSTRY]*** (LS out)

***Summary:***

From S1-220113

***Discussion:*** For e-mail approval. Final version by Thursday 3rd of March, Final version 4th of March.

Same approach as for 172r2, i.e. one cover LS to SA, and proposed LS to external body as attachment.

***Conclusion:*** Revised to S1-220182

[S1-220182](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220182.zip) from Qualcomm Incorporated: ***Final LS to SA Proposal for input to ITU-R on IMT-Industries*** (LS out)

***Discussion:*** Revision of S1-220181.

***Conclusion:*** Email Approval

## 3.9 LSs on IMS emergency communication improvement

[S1-220052](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220052.zip) from GSMA NRG\_012\_204: ***LS reply from NRG to 3GPP on IMS emergency communication improvement - SMS*** (LS in)

***Discussion:*** Orange and Deutsche Telekom want this LS to be postponed to the next SA1 meeting

***Conclusion:*** Postponed

## 3.10 LSs on Haptics

[S1-220173](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220173.zip) from ISO/IEC JTC 1/SC 29/WG 2 N00172: ***LS on Haptics*** (LS in)

***Summary:*** ISO/IEC JTC 1/SC 29/WG 2 would like to inform 3GPP about the current MPEG

standardization effort on the coded representation of haptic media and ask SA1 if any information is available.

***Discussion:*** Answered in 175.

***Conclusion:*** Replied in 0175r2

[S1-220175](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220175.zip) from China Mobile: ***LS to ISO/IEC JTC 1/SC 29/WG 2 N00172 on Draft LS Response on Haptics*** (LS out)

***Summary:*** Proposed answer to S1-220173:

Information regarding haptics can be found in:

- TS 22.261 contains the output from TR22.847 about latency requirements for haptic information in chapter 6.43 and 7.11;

- TS 22.104 contains haptic requirements in chapter 5.2 Periodic deterministic communication, and also in A.6.2, A.6.3.

***Discussion:*** For Huawei, SA4 is the main involved WG. They should be in the loop.

SA4 to be added in cc.

No attachment needed. Info on latest version of specs to be added.

TR 22.847 not to be mentioned (this is a 3GPP internal study).

Rev1: agreed, clean-up needed

Rev2 agreed.

***Conclusion:*** Revised to S1-220190

[S1-220190](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220190.zip) from SA1: ***LS to ISO/IEC JTC 1/SC 29/WG 2 N00172 (cc SA4) on LS Response on Haptics*** (LS out)

***Summary:*** Revision of S1-220175

***Discussion:*** Same as 0175r2 Revision of S1-220175.

***Conclusion:*** Agreed

## 3.11 LSs on other topics

[S1-220063](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220063.zip) from SP-211621: ***LS on Energy Efficiency as guiding principle for new solutions*** (LS in)

***Summary:*** SA requests all WGs and TSGs to consider EE (Energy Efficiency) even more as a guiding principle when developing new solutions and evolving the 3GPP systems specification, in addition to the other established principles of 3GPP system design

***Conclusion:*** Noted

[S1-220065](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220065.zip) from S5-221501: ***Reply LS on energy efficiency as guiding principle for new solutions*** (LS in)

***Conclusion:*** Noted

[S1-220055](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220055.zip) from S3-214336: ***Reply to LS on broadcast of NTN GW or gNB position*** (LS in)

***Conclusion:*** Noted

[S1-220060](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220060.zip) from ITU SG15-LS348: ***LS/r on Time Synchronization support in 3GPP specification (reply to 3GPP TSG SA2-2106786-LS02)*** (LS in)

***Conclusion:*** Noted

[S1-220044](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220044.zip) from BOARDTREND(21)010005r2: ***ETSI Technology Radar, status and request for feed-back*** (LS in)

***Conclusion:*** Noted

[S1-220050](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220050.zip) from GSMA ESTF 02\_102r1: ***LS informing partner groups of ESTF creation*** (LS in)

***Conclusion:*** Noted

[S1-220045](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220045.zip) from C1-217150: ***Use, if any, of network provided "Indication of country of UE location"*** (LS in)

***Conclusion:*** Noted

[S1-220048](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220048.zip) from C1-217451: ***LS on validity of cause value #78*** (LS in)

***Conclusion:*** Noted

[S1-220054](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220054.zip) from S2-2109254: ***Reply LS on limited service availability of an SNPN*** (LS in)

***Conclusion:*** Noted

[S1-220057](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220057.zip) from S5-216412: ***Reply LS on Prioritized Vehicle to Cloud Technical Solutions (Automotive Edge Computing Consortium (AECC))*** (LS in)

***Conclusion:*** Noted

[S1-220059](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220059.zip) from S6-212805: ***Reply LS on Private call forwarding*** (LS in)

***Conclusion:*** Noted

[S1-220061](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220061.zip) from ITU / SP-211247: ***APT REPORT ON EMERGING CRITICAL APPLICATIONS & USE CASES OF IMT FOR INDUSTRIAL, SOCIETAL AND ENTERPRISE USERS*** (LS in)

***Conclusion:*** Noted

[S1-220064](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220064.zip) from GSMA TSG46\_028: ***Reply LS on IMEI for Non-Public Networks/Private Networks without using USIM*** (LS in)

***Conclusion:*** Noted

# 4 New Study and Work Items

## 4.1 SID on FS\_Sensing: Integrated Sensing and Communication

[**S1-220144**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220144.zip) from China Mobile,Xiaomi,Qualcomm: ***New SID on Integrated Sensing and Communication*** (SID new)

***Summary:*** The objective of tis SID is to study use cases and requirements for 5G system to provide integrated sensing and communication services including network-centric, UE-centric (both in coverage and out of coverage) or a combination of both.

***Discussion:*** Rapporteur is still to be decided.

Deutsche Telekom support this WID.

They wonder about non-5G systems, like LTE. This is answered by Huawei to be initially for 5G, but it can be for LTE later.

Qualcomm clarified that this can be used also at the provide interactions with the Application.

For Nokia, this is not going to be operational before 6G. It is not worth spending "5G-time" on this topic. This is also Intel's view.

For the Chair, there is no rule on what 5G versus 6G should be. It will include what delegates will bring.

For Ericsson, this is a significant study, "unusually big" for SA1. They wonder if this is not going to use all of SA1 "bandwidth".

CMCC explained that having the sensors controlled by the 3GPP network will provide a more secure service.

Rev4: the main controversial discussion was on the note about listing or not use cases in the SID. Now the note reads: "NOTE1: Use cases will focus on NR based sensing and could include non-3GPP type sensors (e.g., Radar, camera)."

For CATT, the Note needs to explicitly exclude the use of non 3GPP sensor scenarios alone, because the implementation of these scenarios is transparent to the network and is not recommended to be discussed in this study.

For Huawei, Sony, Xiaomi and Vodafone, the text for Note1 as per rev4 is a good compromise.

For several companies, including CMCC, the "non-3GPP" part should be removed

Vodafone proposed to add "radio parameters" in the list of examples of "Identify KPIs related to NR based sensing", but this is not acceptable by several companies (KPN, Sony, etc.).

In favor of the note1 as per rev4: 14 companies(oppo, Mitre, Sony, Intel, etc.)

Want to remove Note1: 4 (ZTE, China Telcom, CATT, Alibaba)

SA1 agrees to leave the Note1 as per rev4.

"Radio parameters" in e.g.: 1 company (Vodafone)

No "Radio parameters" in the e.g.: 16 companies.

New attempt with "Radio KPIs" instead of "radio parameters", but this is not acceptable by some companies.

In the end, Vodafone accepts not to list "Radio parameters" in the examples.

It is clarified that this does not mean that radio parameters cannot be considered - it is not just listed in the SID as an example.

Rapporteur is Vasil Aleksiev, from t-mobile.at>

Several supporting companies added

Rev6: agreed with all added supporting company

***Conclusion:*** Revised to S1-220191

[S1-220191](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220191.zip) from China Mobile, Xiaomi, Qualcomm, Sony, LGE, vivo, Huawei, Sharp, Futurewei, Nokia, Vodafone,: ***New SID on Integrated Sensing and Communication*** (SID new)

***Summary:*** Revision of S1-220144

***Discussion:*** Same as 0144r6 Revision of S1-220144.

***Conclusion:*** Agreed

[**S1-220146**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220146.zip) from China Mobile Com. Corporation: ***Discussions on Sensing SID proposals*** (discussion)

***Summary:*** Rev1 presented.

"Integrated Sensing and Communication in a 3GPP 5G system" means the sensing service is

provided by the same cellular wireless communication system and infrastructure as used for

communication, and the sensing information could be derived from RF-based and/or non-RF based

sensors. In general, it could involve scenarios of communication assisted sensing, e.g., where 5G

communication system provides sensing services, or sensing assisted communication, e.g., when

sensing information of the communication channel or environment is used to improve the

communication performance of the system.

***Discussion:*** Corresponding WID in S1-220144

***Conclusion:*** Noted

[**S1-220133**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220133.zip) from Xiaomi: ***Integrated Sensing and Communication*** (discussion)

***Summary:*** 3GPP based Integrated Sensing and Communication Service aims to enable 3GPP

system to detect the target information (e.g., shape, size, speed, location, air quality, etc.)

of an object who doesn’t transmit signal.

***Conclusion:*** Noted

[S1-220094](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220094.zip) from Qualcomm Austria RFFE GmbH: ***Cooperative Sensing and Communication - Motivations*** (other)

***Summary:*** Cooperative Communication & ensing

The 5G system can enable and enhance cooperation between Communication and

Sensing services:

• Communication-Assisted Sensing

◦ Using RF and/or non-RF sensor inputs to improve existing QoE for services; and enable

new services for use case such as consumer/gaming, positioning, automotive.

• Sensing-Assisted Communication

◦ Leveraging RF and/or non-RF sensor inputs to improve communication related

operations, e.g., enhanced radio resource management, beam management, mobility,

etc.

• Cooperative communication and sensing could be network-centric, UE-centric or

combination of both.

***Conclusion:*** Noted

[S1-220029](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220029.zip) from vivo: ***Discussion on Network based Sensing Service*** (discussion)

***Summary:*** High-level Objectives：

✓ Identify use cases, service requirements and KPI requirements for Network based Sensing service

supported by 5GS in 3GPP, including BS(s) echo sensing and Uu based sensing

***Discussion:*** Presentation should be limited to 4 slides

***Conclusion:*** Noted

[S1-220108](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220108.zip) from OPPO: ***Discussion on Sensing Scenario and Use Case*** (discussion)

***Summary:*** Discussion and proposal for Sensing study in R19

Proposal: in Release 19 Sensing, the first priority is the indoor/local area scenarios, e.g. Smart Home/Factory etc., to identify the use cases where UEs or IoT devices are involved and their requirements.

indoor/local area scenarios have high technical feasibility and its signal transmission is relatively more stable and simpler than outdoor area scenarios.

***Conclusion:*** Noted

[**S1-220140**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220140.zip) from Huawei Technologies France: ***Discussion Paper: 5G-Advanced Harmonized Sensing and Communication Service*** (discussion)

***Summary:*** R1 presented.

Harmonized Sensing and Communication in 3GPP means that the sensing capability is integrated with cellular wireless communication system to share the same spectrum and infrastructure especially on the industry with both communication and sensing demand, which will optimize both communication and sensing performance.

***Discussion:*** Presentation should be limited to 4 slides

***Conclusion:*** Noted

[**S1-220147**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220147.zip) from China Mobile Com. Corporation: ***FS\_ICS Skeleton*** (other)

***Conclusion:*** Noted

[**S1-220134**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220134.zip) from Xiaomi: ***FS\_ISC Skeleton*** (other)

***Conclusion:*** Noted

[S1-220132](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220132.zip) from Huawei, Huawei Device: ***Sensing used in home intelligence*** (discussion)

***Conclusion:*** Noted

[S1-220121](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220121.zip) from Huawei: ***New use case: Sensing for Smart Transportation*** (discussion)

***Conclusion:*** Noted

a[S1-220179](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220179.zip) from Chair: ***Presentation on progress of Sensing*** (discussion)

***Summary:*** Revision of S1-220121

***Discussion:*** Another drafting session is needed since the discussions are not converging, not even on the scope. E.g. some downscoping is proposed.

***Conclusion:*** Noted

## 4.2 SID on FS\_PassIoT: Passive IoT

[S1-220118](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220118.zip) from OPPO: ***New SID: Study on Energy Harvesting enabled Communication Services in*** (SID new)

***Summary:*** Rev2 presented.

This study aims at identifying new use cases, service requirements and KPI requirements related to the support of energy harvesting enabled Passive Internet of Thingscommunication services in 5GS, through the harvesting of radio waves, light, motion, heat, or any other power source that could be seen suitable. The study shall target a terminal with ultra-low complexity, very small terminal size and longer life cycle etc. Both battery-less terminal operation as well as terminal operation under limited energy storage (e.g., using a capacitor) can be considered.

***Discussion:*** Rev7: non-SA1 terminology should be avoided (e.g. "FR1", etc).

Temporary name: "Energy harvesting enabled Internet of Things EHEIoT"

Several points, in particular the Notes, are seen as too detailed for a SID.

Apple think that the problem of "decomisioned" devices should be addressed.

Rev10: Alibaba proposed to re-introduced a Note 2 about use cases, but this was not acceptable, as already stated in the drafting the previous day.

Alibaba propose to state differently the Note 2, as "Note 2: To provide the appropriate use case context, use cases may include the type of power sources and frequency band (i.e., licensed band, unlicensed band)."

OK to have this note 2: 3 companies (alibaba, vivo, CMCC)

Not OK: 14 companies

About having the sentence: "The study targets device with ultra-low complexity, very small size and longer life cycle, etc. " at the end of the first paragraph of the Objectives:

In favour: 5 companies (Futurwei, vivo, Huawei, etc)

Not in favour: 7 companies (Qualcomm, Motorola, Intel, Orange, etc)

Having this same sentence in the first paragraph, 3rd sentence, of the Justification: it is seen as redundant with the bullets. But no objection to have it here.

OK to keep the sentence but with "ultra-low" to be changed to "low".

"Ambient Power Enabled Internet of Thing": 20 companies prefer it

"Ambient Internet of Thing": 8 companies

SA1 agreed to have:

"Ambient Power-Enabled Internet of Thing":

Acronym: FS\_AmbientIoT

Companies to be added as supporting companies: Sony, SaankhyaLabs

Agreed as rev11.

***Conclusion:*** Revised to S1-220192

[S1-220192](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220192.zip) from OPPO: ***New SID: Study on Ambient power-enabled Internet of Things*** (SID new)

***Summary:*** Revision of S1-220118

***Discussion:*** Same as 0118r11 Revision of S1-220118.

***Conclusion:*** Agreed

[**S1-220157**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220157.zip) from KPN, Huawei, FutureWei, Novamint, CATT, Spreadstrum: ***New SID on Passive Internet of Things for 5G Advanced*** (SID new)

***Summary:*** This study aims at identifying use cases and traffic scenarios to derive potential requirements and KPIs related to the support of Passive IoT communication services in 5G Advance. Passive IoT enables devices to use energy harvesting of e.g. radio energy, light, motion/vibration, or heat to provide the necessary power for communication. Furthermore, Passive IoT devices are constraint in complexity, weight and size, which prevents the use of batteries or large capacitors to store energy.

***Discussion:*** TNO and Oppo will try to merge these 2 proposals on Passive IoT.

***Conclusion:*** Merge into 0118r1

[S1-220119](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220119.zip) from OPPO: ***Motivation on support Energy Harvesting enabled Communication services in 5GS*** (discussion)

***Summary:*** R1 presented.

In order to support EHPIoT, the following aspects, which put new requirements of 5GS, need to be considered

• Extremely-low complexity form factor of the terminal (simplified RF and baseband architecture, limited memory

etc.)

• Additional power sourcing dependency and/or unstable, limited energy that can be harvested

***Conclusion:*** Noted

[**S1-220135**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220135.zip) from Alibaba Group: ***Motivation of supporting Passive IoT*** (discussion)

***Summary:*** Integrating passive IoT into 5GS, ypically non-public network, is an effective way to solve some issues and bring more value to the 5GS.

***Conclusion:*** Noted

[S1-220028](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220028.zip) from vivo: ***Discussion on Passive IoT*** (discussion)

***Summary:*** R1 presented.

Challenges of Passive IoT:

Low communication rate

• High OPEX for manual scanning

• Large number of devices accessing

• Self interference cancellation

• Limited coverage – short communication distance

• Intermittent communication – perform energy

harvest before communication

P

***Discussion:*** Presentation should be limited to 4 slides.

Novamint strongly support introducing Passive IoT (and energy harvesting) topic in 3GPP.

Huawei also support. The communication aspects should be the priority, much more than energy harvesting, which is not much a topic for 3GPP.

Ericsson also support putting the communication aspects ahead.

Nokia support the merging, with a slight preference for the initial formulation of TNO's proposal. They also see it mostly as a 6G topic.

Qualcomm support having a merged SID. They have concerns in TNO's proposal with reducing the terminology to only "Passive IoT", without the energy harvesting part, which might lead to confusion between the battery-less and non-battery-less devices.

***Conclusion:*** Noted

[S1-220120](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220120.zip) from OPPO: ***TR skeleton for New SID on Study on Energy Harvesting enabled Communication Services (EHECS)*** (discussion)

***Conclusion:*** Noted

[**S1-220158**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220158.zip) from KPN: ***Skeleton for Passive IoT TR*** (other)

***Conclusion:*** Noted

[**S1-220159**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220159.zip) from KPN: ***Pseudo-CR on Scope for Passive IoT TR*** (other)

***Conclusion:*** Noted

[**S1-220154**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220154.zip) from Huawei, Hisilicon, BMW Brilliance, China Mobile, KPN?: ***Passive IoT in intralogistics for automobile manufacturing*** (discussion)

***Conclusion:*** Noted

## 4.3 SID on Enhancing 5G system integrating with satellite

[S1-220178](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220178.zip) from KPN: ***New SID on satellite access Phase 3*** (SID new)

***Summary:*** S1-220116 merged with S1-220126.

merged SID on 5GSAT\_ph3

***Discussion:*** This is now one single proposal on Satellite access, called "Study on satellite access - Phase 3".

KPN disagrees that PLMN selection between GEO/LEO/MEO has been discussed enough. Distinction between what GEO access delivers and what GEO access delivers is much bigger that e.g. the distinction between 4G and 5G.

Rev2: the main remaining question is:

Should traffic steering in context of multiple RAT (multo orbit) be handled in FS\_ULTRAS (see corresponding WID) or FS\_5GSAT\_ph3 SIDs ?

In FS\_ULTRAS: 4 companies (including DT, Nokia, China Unicom)

In FS\_5GSAT\_Ph3: 8 companies

Nokia, CATT and China Telecom request for more time before this SID can be agreed

For Novamint, asking for more time without any specific point is abusing the process.

To be continued between now and next meeting.

***Conclusion:*** Revised to S1-220193

[S1-220193](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220193.zip) from Thales: ***New SID on satellite access Phase 3*** (SID new)

***Summary:*** Revision of S1-220178

***Discussion:*** Revision of S1-220178.

***Conclusion:*** Noted

[S1-220126](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220126.zip) from Thales, Novamint: ***Enhancing 5G system to support additional satellite capabilities*** (SID new)

***Discussion:*** Chair's comment: maybe shorter title enhanced 5G NTN support ?

***Conclusion:*** Merged into 0178

[S1-220116](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220116.zip) from China Telecom, CATT: ***New SID on enhancing 5G system integrating with satellite*** (SID new)

***Conclusion:*** Merged into 0178

[S1-220131](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220131.zip) from THALES: ***Motivation for a SID on enhancing 5G system to support additional satellite capabilities for Rel- 19*** (discussion)

***Summary:*** It is proposed to start a new SI to cover new use cases with related pre-conditions, service flows, post-conditions, potential impacts or interactions with existing services/features associated to the support some new capabilities for satellite access, e.g. Store and forward operation, GNSS free operation or Reliable location service.

***Discussion:*** An overall discussion on Satellite access for Rel-19 took place: there is an agreement to have satellite covered by one SID.

Samsung emphasised the need to have SA1 requirements for this topic.

Ericsson reminded that one of the key topics related to satellite is PLMN selection.

Discussions to be continued off-line.

***Conclusion:*** Noted

[S1-220020](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220020.zip) from Thales, TNO, ESA, Gatehouse, Sateliot, Hughes Network: ***Additional satellite capabilities for Rel-19*** (discussion)

***Conclusion:*** Noted

[S1-220115](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220115.zip) from China Telecom, CATT: ***Discussion on Enhancing 5G System Integrating with Satellite for Rel-19*** (discussion)

***Summary:*** Rev 1 presented.

It is proposed to consider following use cases in Rel-19:

Use Case 1: Temporary Networking

Use Case 2: Positioning and Navigation Enhancement

Use Case 3: Integration with Legacy Satellite System

Use Case 4: Coordination with satellite system

Use Case 5: Coordination with multiple satellite RAT

Use Case 6: Local Data Switching via UPFs on LEO satellite

***Discussion:*** Presentation should be limited to 4 slides

***Conclusion:*** Noted

[S1-220082](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220082.zip) from China Mobile Com. Corporation: ***Discussion on traffic scheduling in terrestrial and satellite converged network*** (discussion)

***Summary:*** The key issues list below need to be further studied：

Requirements on traffic scheduling among satellite network and terrestrial network

How to enhance the 5GS to support the traffic scheduling

How to manage the routing policies

***Discussion:*** This is covered by the other SIDs on satellite

***Conclusion:*** Noted

[S1-220098](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220098.zip) from Xiaomi: ***Discussion on satellite enhancement for Rel-19*** (discussion)

***Summary:*** Some examples of satellite enhancements are provided, e.g.: equirements:

• Expending bandwidth through multi satellite

access, e.g. one application traffic can be carried

by both LEO& MEO access

• Applications can select different type of satellite

accesses based on their delay or bandwidth

requirements.

• Data flows can be handed over between LEO and

MEO due to LEO discontinuous coverage to

ensure service continuity

• gNB stores data received from UE at given area

and sends it later to core network when

connection to the GTW/ground station becomes

available.

***Discussion:*** Also covered by the other SIDs on satellite.

***Conclusion:*** Noted

[**S1-220153**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220153.zip) from THALES, NOVAMINT: ***TR skeleton for Study on enhancing 5G system to support additional satellite capabilities*** (other)

***Conclusion:*** Noted

[S1-220117](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220117.zip) from China Telecom, CATT: ***Skeleton of Study on enhancing 5G system integrating with satellite*** (discussion)

***Conclusion:*** Noted

## 4.4 SID on FS\_CAN: Computing force aware network

[S1-220072](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220072.zip) from China Mobile Com. Corporation, China Telecom, vivo: ***New SID on supporting computing aware network*** (SID new)

***Summary:*** This study aims at identifying use cases, providing gap analysis and defining potential requirements in the following aspects regarding computing aware network.

***Discussion:*** 0072r5 approval day C: Nokia, Ericsson

Rev5: to be continued between now and next meeting.

***Conclusion:*** Revised to S1-220194

[S1-220194](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220194.zip) from China Mobile, China Telecom, vivo: ***New SID on supporting computing aware network*** (SID new)

***Summary:*** Revision of S1-220072

***Discussion:*** Revision of S1-220072.

***Conclusion:*** Noted

[S1-220032](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220032.zip) from China Telecomunication Corp.: ***Discussion paper on mobile Computing Aware Network*** (discussion)

***Summary:*** Rev1 presented.

In China Telecom’s view, it is important to utilize distributed computing power and integrate computing power with 5GC. We proposed new SID on Computing Power Network in other work groups, including SA2(#146e-148e) and SA5(#140e). And other WGs suggest that SA1 work would be done first. Therefore, China Telecom think it is necessary to study Computing Aware Network related requirements and use cases in SA1. More details please see backup.

***Conclusion:*** Noted

[S1-220074](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220074.zip) from China Mobile Com. Corporation: ***Motivation of supporting computing aware network*** (discussion)

***Summary:*** The Obejctives are to Study use cases related to leverage 5GS to provide computing aware service and potential requirements, e.g.

Quantify computing resource ;

Authentication and registration ; computing capability in customer-premise networks, etc.

***Conclusion:*** Noted

[S1-220027](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220027.zip) from vivo: ***Discussion on mobile computation force network*** (discussion)

***Summary:*** Rev1 presented.

This study aims at identifying new use cases, service requirements and KPI requirements related to the support

of communication services with computation need in 5G system, including PLMN and NPN.

***Discussion:*** Presentation should be limited to 4 slides.

***Conclusion:*** Noted

[S1-220078](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220078.zip) from China Mobile: ***TR Skeleton of New SID on supporting computing aware network*** (other)

***Conclusion:*** Noted

## 4.5 SID on FS\_Metaverse: Mobile Metaverse Services

[S1-220086](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220086.zip) from Samsung, LG Uplus, Tencent, KDDI, Orange, Dish Network, KT Corp, FirstNet,: ***New WID on Feasibility Study on Mobile Metaverse Services*** (SID new)

***Summary:*** A draft SID for mobile metaverse services.

This study will investigate specific use cases associated with locally relevant XR-based services that offer shared experiences satisfying user expectations of those services.

***Discussion:*** Vivo remarked that the name "Metaverse" might be trademarked. This has to be further checked.

Oppo does not agree with the new bullets added in rev2 and 3.

For Vivo, the scope is much more reduced than what the title "metaverse" seems to cover. They also disagree with some use cases, that seem to conflict between each other (e.g. Avatar seems to cover the other bullets).

For Huawei, the number of users than can interact with each other is a key parameter, and this has to be covered by the study.

For Nokia, Qualcomm, there is a clear overlap with TACMM that has to be clarified. For Nokia, this is a 6G topic. For the Chair, this "6G" topic should not be used since it is unclear.

For Samsung, the focus is on Application enablement, e.g. avatar, etc.

R10 presented on the 2nd week: the discussions are converging. The title can be changed from "Study on Mobile Metaverse Services" to "Study on Localized Mobile Metaverse Services".

Rev13: Sony, Qualcomm, Huawei, China Telecom, China Unicom to be added as supporting companies.

No issue of trademark to use "metaverse".

Rev14 agreed.

***Conclusion:*** Revised to S1-220195

[S1-220195](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220195.zip) from Samsung, LG Uplus, Tencent, KDDI, Orange, Dish Network, KT Corp, FirstNet, Charter: ***New WID on Feasibility Study on Localized Mobile Metaverse Services*** (SID new)

***Summary:*** Revision of S1-220086

***Discussion:*** Same as 0086r14 Revision of S1-220086.

***Conclusion:*** Agreed

[S1-220087](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220087.zip) from Samsung: ***Mobile Metaverse Services*** (discussion)

***Summary:*** Provides background, motivation and insight into the objectives of the proposed Metaverse study item.

Several aspects to be studied by 3GPP, e.g. how to:

- integrate interactive XR media into other activities and services.

- capture visual and other information to enable creation of spatial information.

- create shared services, that multiple users can experience realistically.

- combine representations of remote users for Avatars

***Conclusion:*** Noted

[S1-220088](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220088.zip) from Samsung: ***Draft Skeleton for TR for Study on Mobile Metaverse Services*** (other)

***Summary:*** An ordinary draft skeleton for a SA1 study item TR.  
  
Since the SID is not approved, there is no spec #. So this is a document of type 'other' instead of 'draft TR'.

***Conclusion:*** Noted

[S1-220089](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220089.zip) from Samsung: ***Pseudo-CR on Scope for the FS\_Metaverse TR*** (other)

***Summary:*** This P-CR provides a scope for the FS\_Metaverse study TR.

Since the SID is not approved, there is no spec #. So this is a document of type 'other' instead of 'pCR'.

***Conclusion:*** Noted

## 4.6 SID on FS\_Hologra: 5G enabling naked eye holography service

[S1-220011](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220011.zip) from China Mobile: ***New SID on 5G enabling naked eye holography service*** (SID new)

***Summary:*** Rev2 presented.

The objective of work is to study use cases related to naked eye holography service and identify potential service and performance requirements for 5G system.

***Discussion:*** For Ericsson, this is very close to SA4 activities.

This could be included in the Metaverse SID.

***Conclusion:*** Noted

[S1-220012](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220012.zip) from China Mobile Com. Corporation: ***5G enabling naked eye holography service*** (discussion)

***Summary:*** Study use cases related to naked eye holography service and identify potential service and performance requirements for 5G system. Aspects to be studied include,but are not limited to:

Study potential service requirements to support immersive experience, e.g. somatosensory interaction and eye movement interaction.

Identify holography information characteristics( including data/traffic model) and service requirements for transferring holography information.

Identify KPIs regarding naked eye holography service, including hologram resolution, viewing angle, latency, reliability, data rate, etc.

Other aspects, e.g. charging, security..

***Discussion:*** Presentation should be limited to 4 slides.

***Conclusion:*** Noted

[S1-220041](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220041.zip) from China Mobile Com. Corporation: ***pCR FS\_NEHS Skeleton*** (discussion)

***Conclusion:*** Noted

[S1-220042](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220042.zip) from China Mobile: ***pCR FS\_NEHS Scope*** (discussion)

***Conclusion:*** Noted

## 4.7 SID on FS\_NetShare: Network sharing in 5GS

[S1-220013](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220013.zip) from China Unicom, China Telecom: ***New study on network sharing in 5GS*** (SID new)

***Summary:*** Update according to the comments collected after the last meeting. Main updates include justification and objective parts.

Rev3 presented.

The purpose of this technical report is to collate in a single document the requirements, considerations, deployment scenarios that operators as well as users need to see fulfilled for a successful use of a shared network and highlight the expected user experience for them

***Discussion:*** R7 presented: title still not correct

Rev9: "Feasibility " to be removed from the title

Qualcomm support

Agreed as rev10

***Conclusion:*** Revised to S1-220196

[S1-220196](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220196.zip) from China Unicom, China Telecom, Charter Communications, vivo,: ***Study on Network Sharing Aspects*** (SID new)

***Summary:*** Revision of S1-220013

***Discussion:*** Same as 0013r10 Revision of S1-220013.

***Conclusion:*** Agreed

[S1-220014](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220014.zip) from China Unicom: ***Update of Discussion paper of network sharing in 5G*** (SID new)

***Summary:*** Update of last meeting DP. It includes the research on the concept and definition of network sharing, key gap, new scenarios, and potential requirements corresponding to the Objective.

A new SID is proposed to share network. E.g. in a cooperation bussiness mode, Operators A and B, both licensed to operate a 4G network, and a 5G network have agreed to

share the core and the radio access networks in some areas of the country where the traffic is

expected to be low (Low Traffic Areas, or LTA) while building share or dedicated 5G radio

access networks in the areas with higher traffic density (High Traffic Areas or HTA). The

LTA/HTA is split in two parts, one built by Operator A, the other by Operator B or Operator C.

***Discussion:*** Presentation should be limited to 4 slides.

For Deutsche Telekom, the basic motivations, what is meant to achieved, remain unclear. This would trigger major security issues. They also have concerns about the grammatical understanding of what is written in the SID proposal.

Nokia and Qualcomm share the same concerns.

For one2many too, the objective is unclear.

China Unicom explained that some gap analysis is provided as an annex to the slide presentation. They also commented back that some concerns are quite vague.

***Conclusion:*** Noted

## 4.8 SID on FS\_FRMCS\_Ph3: FRMCS Evolution Phase 3

[S1-220018](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220018.zip) from UIC, KT, LGUplus, ETRI, Kyunggi University, Hansung University,: ***New study on FRMCS Evolution Phase 2*** (SID new)

***Discussion:*** Rev2 presented on the 2nd week: Nokia and Huawei to be added.

New name: "Study on FRMCS Phase 3" (FS\_FRMCS\_Ph3).

Rev3 agreed.

***Conclusion:*** Revised to S1-220197

[S1-220197](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220197.zip) from UIC, KT, LG Uplus, ETRI, Kyunggi University, Hansung University,: ***Study on FRMCS Phase 3*** (SID new)

***Summary:*** Revision of S1-220018

***Discussion:*** Same as 0018r3

***Conclusion:*** Agreed

[S1-220019](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220019.zip) from Union Inter. Chemins de Fer: ***Motivation for Rel-19 SID proposal on FS\_eFRMCS2*** (discussion)

***Summary:*** A Rel-19 SI on FRMCS is proposed for Rel-19 to:

- refine existing use cases coming from a gap analysis between the newly released FRMCS specifications and latest version of TR 22.989. 9 existing use cases have already been identified (e.g. Merging Railway Emergency Alerts)

- identify new use cases coming from a gap analysis between the newly released FRMCS specifications and latest version of TR 22.989. 4 new use cases have already been identified (e.g.: Public train emergency communication related use cases)

- derive new potential requirements to stage 1 TS (e.g., 5GS, MCX)

This will keep UIC and 3GPP aligned.

***Discussion:*** Presentation should be limited to 4 slides.

***Conclusion:*** Noted

## 4.9 SID on FS\_DisData: 5G enabled Distributed Data Management

[S1-220022](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220022.zip) from ZTE Corporation, CEPRI, China Telecom, China Unicom: ***New study on 5G enabled Distributed Data Management*** (SID new)

***Discussion:*** 0022r6 C: Nokia, Ericsson, Huawei, Novamint

Rev7: presented

To be progressed between now and next meeting. New tdoc will be given to latest version.

***Conclusion:*** Revised to S1-220198

[S1-220198](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220198.zip) from ZTE Corporation, CEPRI, China Telecom, China Unicom: ***New study on Measurement Data Collection and Integrity*** (SID new)

***Summary:*** Revision of S1-220022

***Discussion:*** Revision of S1-220022.

***Conclusion:*** Noted

[S1-220021](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220021.zip) from ZTE Corporation: ***Discussion paper for 5G enabled Distributed Data Management*** (discussion)

***Conclusion:*** Noted

[S1-220023](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220023.zip) from ZTE: ***FS\_DDM: TR 22.XXX skeleton*** (other)

***Conclusion:*** Noted

## 4.10 SID on FS\_LocalMesh: Mesh based Local Communication Service

[S1-220025](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220025.zip) from ZTE Corporation, China Telecom: ***New study on Mesh based Local Communication Service*** (SID new)

***Summary:*** The objectives of this study item are:

- Study use cases to enhanced 5G system support of mesh based local communication service,

- Investigate potential new requirements, including:

- Gap analysis between the identified requirements and existing 5GS requirements in 3GPP specs TS 22.261/22.104.

***Discussion:*** Samsung remarked that ad hoc mobile meshes are not high reliability. The routing protocols do not alwayd converge well, and have scaling problems.

***Conclusion:*** Merge into 0077r4

[S1-220024](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220024.zip) from ZTE Corporation: ***Discussion: Mesh based Local Communication Service*** (discussion)

***Conclusion:*** Noted

[S1-220026](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220026.zip) from ZTE: ***FS\_MeshLCS: TR 22.XXX skeleton*** (other)

***Conclusion:*** Noted

## 4.11 SID on FS\_NomRelay: Enhancement of Relay Communication for eMBB

[S1-220077](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220077.zip) from China Telecom: ***New SID on Enhancement of Relay Communication for eMBB*** (SID new)

***Summary:*** The objectives of this study are to define:

- Use cases and corresponding requirements, including:

- Other aspects, including charging and security,

- Gap between the identified requirements for the multi-path and the existing requirements.

***Discussion:*** For Sony and Nokia, if this was already specified by RAN, a SID is not required, it's just an alignment which is needed.

Rev4: presented

To be progressed between now and next meeting. New tdoc will be given to latest version.

***Conclusion:*** Revised to S1-220199

[S1-220199](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220199.zip) from China Telecom, ，ZTE, CEPRI: ***New SID on Multi-hop Multi-path Relay Network for Extensiveded CoverageEnhancement*** (SID new)

***Summary:*** Revision of S1-220077

***Discussion:*** Revision of S1-220077.

***Conclusion:*** Noted

[S1-220080](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220080.zip) from China Telecom Corporation Ltd.: ***Discussion on Enhancement of Relay Communication for eMBB*** (discussion)

***Conclusion:*** Noted

[S1-220081](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220081.zip) from China Telecom: ***TR skeleton of Study on Enhancement of Relay Communication for eMBB*** (other)

***Conclusion:*** Noted

## 4.12 SID on FS\_MobRelay: New SID on Mobile Relay Service

[**S1-220138**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220138.zip) from Xiaomi: ***New SID on Mobile Relay Service*** (SID new)

***Summary:*** The aim of this study item is to identify the use cases and potential requirements to support mobile relay service, including:

- Identify new use cases and requirements to enable communication over mobile relay for extending the network coverage

- Security and privacy

- Charging for the usage of relay

- Gap analysis between the identified requirements and existing 5GS requirements or functionalities

***Discussion:*** For Sony, Qualcomm, , several WIDs presented here are very similar, and it is not clear what is missing.

Rev1: presented

Proposed to be merged with the other Relay SID.

To be progressed between now and next meeting. New tdoc will be given to latest version.

***Conclusion:*** Revised to S1-220200

[S1-220200](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220200.zip) from Xiaomi: ***New SID on enhanced mobile relay*** (SID new)

***Summary:*** Revision of S1-220138

***Discussion:*** Revision of S1-220138.

***Conclusion:*** Noted

[**S1-220139**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220139.zip) from Xiaomi Technology: ***DP on Mobile Relay Service*** (discussion)

***Conclusion:*** Noted

[S1-220137](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220137.zip) from Xiaomi Technology: ***New SID on Mobile Relay Service*** (SID new)

***Conclusion:*** Withdrawn

## 4.13 SID on FS\_PINVR: Personal IoT Networks with vehicles in roaming

[S1-220031](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220031.zip) from vivo: ***New SID on Personal IoT Networks with vehicles in roaming scenarios*** (SID new)

***Summary:*** Rev1 presented.

***Discussion:*** 0031r6 approval day C: Nokia, Ericsson, DT

Rev6: presented

To be progressed between now and next meeting. New tdoc will be given to latest version.

***Conclusion:*** Revised to S1-220201

[S1-220201](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220201.zip) from vivo: ***New SID on Personal IoT Networks phase 2*** (SID new)

***Summary:*** Revision of S1-220031

***Discussion:*** Revision of S1-220031.

***Conclusion:*** Noted

[S1-220030](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220030.zip) from vivo: ***Discussion on Personal IoT Networks with vehicles in roaming*** (discussion)

***Summary:*** Rev1 presented.

This study aims at identifying new use cases, providing gap analysis and defining potential requirements

regarding 5GS support of Personal IoT networks (PIN) enhanced with vehicle in roaming scenarios.

Rev1 clarifies what is new, e.g.:

- Credential downloading in VPLMN of H-credential via PIN gateway (PIN gateway is

using the credential of the VPLMN from the first place)

- bonding of the V-credential (credential provisioned in the VPLMN) and home credential needs to

be supported

- authorization from Home operator is needed before v-credential provisioning

***Discussion:*** For Nokia and Futurwei, they do not see the needs of "V-credentials": the classic credentials should be sufficient.

For Huawei, it is not clear what is new.

For Sony and Deutsche Telekom, considering that for Rel-18 SA2 has taken only a small portion on the PIN work SA1 did in Rel-18, they wonder if further work is really needed on this.

***Conclusion:*** Noted

## 4.14 SID on FS\_MINT\_CNF: Support for Minimization of Service Interruption during Core Network Failure

[S1-220034](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220034.zip) from China Telecom: ***New SID on Support for Minimization of Service Interruption during*** (SID new)

***Summary:*** Rev1 presented

***Discussion:*** For Qualcomm, Nokia and Deutsche Telekom, there is no SID for just what could be adding a couple of requirements (a mini WID is enough).

For Deutsche Telekom, the NPN aspects have to be clarified.

Rev2: It is proposed to name it "Study on Minimization of Service Interruption Phase 2" (FS\_MINT\_Ph2), as to have it more generic.

For Nokia and Qualcomm, the scope needs to be further clarified, and in particular as to make it clearer with respect to what is new compared to MINT "Phase 1".

Rev5: presented

To be progressed between now and next meeting. New tdoc will be given to latest version.

***Conclusion:*** Revised to S1-220202

[S1-220202](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220202.zip) from China Telecom: ***New SID on Minimization of Service Interruption Phase 2*** (SID new)

***Summary:*** Revision of S1-220034

***Discussion:*** Revision of S1-220034.

***Conclusion:*** Noted

[S1-220035](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220035.zip) from China Telecom Corporation Ltd.: ***Discussion Paper on Support for Minimization of Service Interruption during Core Network Failure*** (discussion)

***Summary:*** Rev1 presented

The aim of this study is to gather and analyse scenarios of 5G CN failure and derive potential service requirements out of these scenarios. Potential aspects to be addressed to derive relevant service requirements include e.g.:

The scenarios, scales or causes of interruption of communication service;

Allowing impacted users to be authorized to access some essential service (e.g. voice, SMS) of the functioning 5G CN, while not affecting the service provided to its home users;

Other aspects, including security and privacy requirements;

Gap analysis between the identified requirements and what is already defined by existing 3GPP requirements.

***Conclusion:*** Noted

[S1-220036](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220036.zip) from China Telecom: ***Skeleton on Support for Minimization of Service Interruption during Core Network Failure*** (other)

***Conclusion:*** Noted

## 4.15 SID on FS\_AIML\_UE: UE-Network coordinated AI/ML Service

[S1-220039](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220039.zip) from OPPO: ***New WID on study on UE-Network coordinated AI/ML Service*** (SID new)

***Summary:*** New WID proposal on study on UE-Network coordinated AI/ML Service

***Discussion:*** Rev6:

Acronym still not aligned as per S1-220171.

Rev8: now proposed to be "Study on AI/ML Model Transfer\_Phase2" (FS\_AMMT\_Ph2)

For Nokia, "sidelink" is a radio term, not to be used in SA1 (to be replaced by "D2D connection" or by " direct device connection" as per 22.261).

"PC5" to be replaced by "direct communication"

Last Note from the SID has to be removed, since it states what might be allowed: "Note: Requirement of direct network communication, if any, to support the Distributed AI traning/inference may be considered."

Agreed as rev9.

***Conclusion:*** Revised to S1-220183

r[S1-220183](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220183.zip) from OPPO: ***Study on AI/ML Model Transfer\_Phase 2*** (SID new)

***Summary:*** Identical to S1-220039r9

***Conclusion:*** Revised to S1-220184

rr[S1-220184](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220184.zip) from OPPO: ***Study on AI/ML Model Transfer\_Phase 2*** (SID new)

***Summary:*** Replaces S1-220183

***Conclusion:*** Agreed.

[S1-220038](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220038.zip) from OPPO: ***Discussion on UE-Network coordinated AI/ML Service*** (discussion)

***Summary:*** Rev2 presented

5G direct device connection can be used to perform distributed learning/inference among devices, achieving the goal of using local data with privacy protection, energy saving, training efficiency. etc. Potential scenarios are

***Conclusion:*** Noted

[S1-220037](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220037.zip) from OPPO: ***TR skeleton for potential R19 study on UE-Network coordinated AI/ML ServiceFS\_ UNAS: TR 22.xxx skeleton*** (discussion)

***Summary:*** TR skeleton for R19 study on UE-Network coordinated AI/ML Service, if the SID is approved.

***Conclusion:*** Noted

## 4.16 SID on FS\_LiMigr: Live Migratable Services in the 5G System

[S1-220070](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220070.zip) from China Telecom: ***New study on Live Migratable Services in the 5G System*** (SID new)

***Summary:*** R1 is with the correct acronym.

***Discussion:*** Include FS\_LMS in the acronym

Rev10: to be used as a basis for future discussions, to be handled between this meeting and next. New number to be given.

***Conclusion:*** Revised to S1-220203

[S1-220203](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220203.zip) from China Telecom: ***New study on Live Migratable Services in the 5G System*** (SID new)

***Summary:*** Revision of S1-220070

***Discussion:*** Revision of S1-220070.

***Conclusion:*** Noted

[S1-220071](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220071.zip) from China Telecommunications: ***Discussion on Live Migratable Services in the 5G System*** (discussion)

***Summary:*** Live Migration is known as a Network Function Virtualization technology to save or restore a Virtual Machine in real-time. It usually saves the running status of the entire VM and quickly restores the VM to the original or even different hardware platforms. After recovery, the virtual machine continues to run smoothly while users will not notice any difference.

The objective of this study is to study use cases and potential new requirements for Live Migratable Services in the 5G System.

***Discussion:*** Upon request from Vodafone, China Telecom explained the differences with "Multi-access edge computing".

Deutsche Telekom would not like to open their network to another network operator the way it is proposed in this SID.

The intentions are not clear to all delegations.

***Conclusion:*** Noted

[S1-220073](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220073.zip) from China Telecom: ***LMS: TR 22.XXX skeleton*** (discussion)

***Summary:*** Revision of S1-220071

***Conclusion:*** Noted

## 4.17 SID on FS\_ReduCarb: System Enhancement for Reducing Carbon Emission

[S1-220075](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220075.zip) from China Mobile: ***New SID on Study on System Enhancement for Reducing Carbon Emission*** (SID new)

***Summary:*** R3 presented.

***Discussion:*** For Sony, this Studdy is too vague. Nobody objects to the target, but more concrete proposals should be made (comment also made by Deutsche Telekom by email).

For Deutsche Telekom, this should be limited to the SA1 aspects, i.e. service requirement aspects.

For KPN, the first bullet ("• Consider how to evaluate carbon emission (e.g. introduce different carbon emission levels, etc.);") is the most important one. For the other bullets, it can be several more.

For Samsung, "Carbon Emission" is not the correct aspect. It should rather be "Energy efficiency". The bullets listed there are not acceptable for SA1: they are solutions, most of them RAN solutions. Samsung also pointed that SA has done a lot of work in this area, which is not mentioned here.

Vodafone agree that "Energy efficiency" is a better wording.

Huawei pointed out that there is an ETSI ISG on this topic, and starting something in SA1 might be counter productive.

R9: several added supporting companies (InterDigital, Orange, Telefonica, IIT Bombay, SaankhyaLabs)

But also several companies that need more time to review/discuss: Nokia, Huawei, Qualcomm, KPN, Deutsche Telekom.

Rev11: Nokia, Qualcomm and Sony commented that this has completely changed during the course of the meeting. Even if this goes in a nice direction to them, they prefer to have more time until next meeting to review it.

New number to be provided.

***Conclusion:*** Revised to S1-220204

[S1-220204](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220204.zip) from China Mobile: ***New SID on service enhancement of Energy Efficiency*** (SID new)

***Summary:*** Revision of S1-220075

***Discussion:*** Revision of S1-220075.

***Conclusion:*** Noted

[S1-220076](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220076.zip) from China Mobile Com. Corporation: ***Motivation of study on System Enhancement for Reducing Carbon Emission*** (discussion)

***Summary:*** R3 presented.

Study use cases related to reduce carbon emission of 5GS and UE and potential requirements

***Discussion:*** Presentation should be limited to 4 slides.

***Conclusion:*** Noted

[S1-220079](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220079.zip) from China Mobile: ***TR Skeleton of New SID on System Enhancement for Reducing Carbon Emission*** (other)

***Conclusion:*** Noted

## 4.18 SID on FS\_MPS4txt: Feasibility Study on MPS for Text Messages

[S1-220095](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220095.zip) from Peraton Labs, CISA, T-Mobile US, Verizon, AT&T: ***New WID on Feasibility Study on MPS for Text Messages*** (SID new)

***Summary:*** Proposal for Rel-19 Feasibility Study on MPS for Text Messages

***Discussion:*** For Nokia, this can be covered by a miniWID. Peraton is fine with this approach.

R3: No concern on the proposal, but SA1 agrees for Peraton to bring a miniWID at a future meeting (no study needed).

***Conclusion:*** Noted

[S1-220096](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220096.zip) from Peraton Labs: ***Presentation of New WID on Feasibility Study on MPS for Text Messages*** (discussion)

***Summary:*** In addition to Multimedia Priority Service (MPS) for MMTEL voice/video and MPS for DTS communications specified in TS 22.153, MPS Service Users may also need priority for text communications during disaster events

***Conclusion:*** Noted

[S1-220097](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220097.zip) from Peraton Labs, CISA, T-Mobile US, Verizon, AT&T: ***Skeleton for Feasibility Study on MPS for Text Messages*** (SID new)

***Summary:*** This document proposes a skeleton outline for the new feasibility study on MPS for Text Messages

***Conclusion:*** Noted

## 4.19 SID on FS\_EOS: Study on 5G Enabled Open-SON

[S1-220106](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220106.zip) from Reliance Jio, Radisys.: ***New SID on 5G Enabled Open-SON*** (SID new)

***Summary:*** R2 presented

Discussion: Missing acronym. Maybe FS\_EOS?

Last day: rev2: 3 objections, thinking this is out of scope of 3GPP.

New number to be given,

***Conclusion:*** Revised to S1-220205

[S1-220205](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220205.zip) from Reliance Jio: ***New SID on 5G Enabled Open-SON*** (SID new)

***Discussion:*** Revision of S1-220106.

***Conclusion:*** Noted

[S1-220102](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220102.zip) from Reliance Jio: ***5G Enabled Open-SON*** (discussion)

***Summary:*** Study on 5G Enabled Open-SON. The objective of work is to study use cases related to Open-SON and identify potential service and performance requirements for 5G system.

***Discussion:*** Presentation should be limited to 4 slides

Samsung commented that Network analytics is taking place in several 3GPP groups, and there is a collaboration between SA5 and RAN3 on this topic. SA1 should not start working on the same topic. Ericsson and Nokia support this view, that this should be submitted to SA5.

***Conclusion:*** Noted

[S1-220099](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220099.zip) from Reliance Jio: ***New SID on 5G Enabled Open-SON*** (discussion)

***Summary:*** Study on 5G Enabled Open-SON.

***Conclusion:*** Withdrawn

## 4.20 SID on FS\_ ULTRAS: Upper Layer TRaffic Aggregation and Steering

[S1-220111](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220111.zip) from Qualcomm, Lenovo, CableLabs, Xiaomi, Comcast Corporation,: ***New SID on Upper layer traffic aggregation and steering, over dual*** (SID new)

***Summary:*** R2 presented

Study use cases and service requirements to enable 5GS support of upper layer steering, split and switching of UE’s traffic pertaining to the same data session using dual 3GPP access, including the following scenarios:

- Single PLMN, PLMN and SNPN, two PLMNs

- Single or dual subscription

- Same or different 3GPP RATs

***Discussion:*** Introduce FS in the title and acronym

For Huawei, the scope of the study is not clear. They understand that it is to achieve higher bitrate to the user by combining different accesses, but this is more an SA2 issue.

Deutsche Telekom and Ericsson agree with Huawei's comments.

Deutsche Telekom and T-Mobile USA have concerns about the dual subscription part of the proposal.

For Ericsson, using redundancy (e.g. satellite, multiple network, etc) is possible, the agregation can be done outside.

Mitre support the Qualcomm's proposal, admitting that some of the points raised by Huawei have to be solved.

Nokia support but the objectives have to be rewritten to make it clearer what is for SA1 to define.

Apple support this SID, explaining that some 3GPP WGs are asking for more precise requirements.

Charter also support.

For Deutsche Telekom, some requirements have been already defined since Rel-15.

Qualcomm recognises that this has impacts mostly on SA2, but still some requirements have to be defined in SA1.

R5: Qualcomm clarified that the main point of contention is about "Inter-PLMN dual network subscription".

Deutsche Telekom still have concerns with the dual subscription, but can agree with the WID if it is restricted to single subscription.

For Huawei, this is more an SA2 proposal as it is. It can be rephrased entirely to clarify what is new from a service perspective.

CableLabs, Comcast and Charter do not agree to remove the Dual Subscription part.

Comcast highlighted that a possible conclusion is that it cannot be done, but it can at least be studied.

For Ericsson, no need to go through a Study, this is an already ongoing item that can go directly to normative work.

Qualcomm will try to compromise by focussing on the Single Subscription, not excluding Dual Subscription.

For Qualcomm, this is a simple improvement of ATSSS.

About "Note 2": no objection, except that the word "should" should not apeear in a Note.

Last day: rev6: Huawei still has concerns which they think were not covered in the latest revision. There will be no requirement for this, in their view.

For Qualcomm, there is a significant number of supporting companies. They propose to "technically endorse" it, but Huawei does not technically endorse it.

Qualcomm proposed to have a Working Agreement. For the Chair, this will be decided in the May meeting.

There is no other objection beside from Huawei, who sustain their objection.

Ericsson support waiting for the next meeting because of Huawei's objection.

New tdoc number to be given.

***Conclusion:*** Revised to S1-220206

[S1-220206](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220206.zip) from Qualcomm, Lenovo, CableLabs, Xiaomi, Comcast Corporation,: ***New SID on Upper layer traffic steering, switching and split over*** (SID new)

***Summary:*** Revision of S1-220111

***Discussion:*** Revision of S1-220111.

***Conclusion:*** Noted

[S1-220112](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220112.zip) from Qualcomm Incorporated: ***ULTRAS - motivations*** (other)

***Summary:*** R1 presented.

Proposal for SA1 Rel-19: study use cases and potential requirements to extend ATSSS support to dual 3GPP access => See SID proposal for detailed objectives

***Conclusion:*** Noted

## 4.21 SID on FS\_HostNet: supporting enhanced services configuration in hosting networks

[S1-220122](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220122.zip) from Lenovo: ***New SID on supporting enhanced services configuration in a hosting network*** (SID new)

***Summary:*** Rev1 presented

The aim of this work is to study use cases, deployment models and identify potential service requirements for supporting enhanced services configuration in a serving network.

***Conclusion:*** Noted

[S1-220123](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220123.zip) from Lenovo : ***Motivation for study on supporting enhanced services configuration in a hosting network*** (discussion)

***Summary:*** Rev1 presented

***Conclusion:*** Noted

[S1-220124](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220124.zip) from Lenovo: ***TR skeleton for study on supporting enhanced services configuration in a hosting network*** (discussion)

***Conclusion:*** Noted

## 4.22 SID on FS\_Cloud: enhancement of 5GC based on Cloud Native

[S1-220127](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220127.zip) from Alibaba: ***New SID: Study on enhancement of 5GC based on Cloud Native*** (SID new)

***Summary:*** Rev2 presented

***Discussion:*** For several companies, there are main changes between the previous version and the new one, where only NPN is meant to be covered, and this was submitted too soon before the presentation (file uploaded when the session has already started).

For Siemens and Nokia, this is not a 3GPP topic. Ericsson, Deutsche Telekom, KDDI and Mitre also think that this is more a deployment issue, and that it is not a study for 3GPP.

Last day: rev3: 3 objections still on.

New tdoc number to be given.

***Conclusion:*** Revised to S1-220207

[S1-220207](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220207.zip) from Alibaba: ***New SID: Study on elastic, scalable and flexiblecloud based 5G core*** (SID new)

***Summary:*** Revision of S1-220127

***Discussion:*** Revision of S1-220127.

***Conclusion:*** Noted

[S1-220130](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220130.zip) from Alibaba Group: ***Discussion on enhancement of 5GC based on Cloud Native*** (discussion)

***Summary:*** Rev1 presented

This study aims at identifying new use cases, service and KPI requirements related to the support of the cloud-based non-public network.

***Conclusion:*** Noted

## 4.23 SID on FS\_UAS\_Ph3: Additional capabilities of mobile networks for drone operations and management

[**S1-220141**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220141.zip) from China Mobile: ***New SID on Additional capabilities of mobile networks for drone*** (SID new)

***Discussion:*** Rev4 presented the 2nd week: name still to be changed. It is clarified to be Phase 3:

"Phase 1" = FS\_ID\_UAS = TR 22.825

"Phase 2" = FS\_EAV = TR 22.829

"Phase 3" = proposal here

Also, it is clarified that UAS refers to drone and controller, while UAV is for the drone only.

The main remaining concern is about "multiple PLMNs." (4th bullet of the objective, and the associated Note):

9 companies want to have it, while 5 prefer to have it removed.

Still no consensus on Mon 21st Feb.

Last day: rev9: Qualcomm still has a sustained objection. Rev9 is not the version that was submitted to the approval day, which contained an extra bullet (on multiple PLMNs), which was asked to be removed by Deutsche Telekom and other companies. Futurwei also have issues.

The concern is in the bullet that was in rev8 and disappeared in rev9, i.e. "Support of multi-network connectivity and service continuity for redundancy or reliability, e.g. at inter-PLMN border or in the presence of multiple PLMNs ;" (and the corresponding nOte)

Want to have it: 5 companies (includingQc, SynchTechno, )

Don’t want to have it: 4 companies (DT, Huawei, Telefonica, Nokia)

To be continued up to the next meeting.

***Conclusion:*** Revised to S1-220208

[S1-220208](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220208.zip) from China Mobile: ***New SID on UAV Phase 3*** (SID new)

***Summary:*** Revision of S1-220141

***Discussion:*** Revision of S1-220141.

***Conclusion:*** Noted

[**S1-220142**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220142.zip) from China Mobile Com. Corporation: ***Motivation of Additional capabilities of mobile networks for drone operations and management*** (discussion)

***Summary:*** Rev2 presented.

The objective of this study item is to identify additional use cases to meet industrial UAV applications in order

to derive additional requirements for mobile networks to support drone operations and drone manageme

***Discussion:*** Should be FS\_UAS\_Ph3

Huawei and Nokia support, with further modifications needed.

The main controversial point is whether the support for Multiple PLMN has to be in or out. E.g. Qualcomm and Mitre support, while Deutsche Telekom does not.

***Conclusion:*** Noted

[**S1-220143**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220143.zip) from China Mobile Com. Corporation: ***FS\_DOM Skeleton*** (other)

***Conclusion:*** Noted

## 4.24 SID on FS\_SOBOT: 5G System Support for a Network of Service Robots with Ambient Intelligence

[**S1-220149**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220149.zip) from LG Electronics, LG Uplus, OPPO, KRRI, China Unicom, Kyonggi University,: ***Feasibility Study on 5G System Support for a Network of Service Robots with*** (SID new)

***Summary:*** Rev1 presented.

The scenarios that will be reviewed and studied to derive potential service and performance requirements include group operation models (or multi-agent models) where multiple service robots work together for a single task.

***Discussion:*** Vodafone supports this Study.

Huawei support the idea of supporting robots by the 3GPP system. The concern is about the gap analysis.

Qualcomm also support the topic, and thank LG for their continuous effort for enhancing the SID. Some further clarifications are however needed, e.g. on the 3rd bullet.

Same comments and concerns from Nokia.

R7: title still not aligned with the proposal of doc 171.

Wording to be consistent in all the WID (for instance, not to use "E.g", "(e.g", ", .e.g" etc)

Several companies are indicated with a question mark. This is to be cleaned.

For Nokia, this is still an over-the-top application, and no 3GPP work is needed.

Last day: rev12: still 3 objections, including Nokia.

The controversial bullet is "support of scalable and efficient use of radio resources needed for stable operation of multiple service robots especially when a large number of service robots are present "

For Nokia, a 900 series TR and a miniWID might be enough.

To be continued between now and next meeting.

***Conclusion:*** Revised to S1-220210

[S1-220210](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220210.zip) from LG Electronics, LG Uplus, OPPO, KRRI, China Unicom, Kyonggi University,: ***Feasibility Study on 5G System Support for a Network of Network of Service*** (SID new)

***Summary:*** Revision of S1-220149

***Discussion:*** Revision of S1-220149.

***Conclusion:*** Noted

[**S1-220151**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220151.zip) from LG Electronics Inc.: ***SOBOT - Presentation*** (discussion)

***Summary:*** SOBOT SID Presentation

***Conclusion:*** Noted

[**S1-220150**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220150.zip) from LG Electronics Inc.: ***SOBOT - TR Skeleton*** (other)

***Summary:*** TR Skeleton proposal for SOBOT SID

***Conclusion:*** Noted

[S1-220152](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220152.zip) from LG Electronics Inc.: ***SOBOT - Use Case example*** (discussion)

***Summary:*** SOBOT - Use Case example (if it's in scope for this meeting)

***Discussion:*** Late document

***Conclusion:*** Noted

## 4.25 SID on FS\_MUS: 5GS supporting Mobile User Service

[**S1-220148**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220148.zip) from Xiaomi: ***New SID on 5GS supporting Mobile User Service*** (SID new)

***Summary:*** R2 presented.

This SID is workable based on the pre-condition “ under user’s authorization, obey any regulations, by considering MNOs policy”, the services enabled by the Mobile User Service is out scope of this SID.

***Discussion:*** 0148r3 approval day C: Nokia, Ericsson, Huawei

Last day: rev3: still 3 objections.

To be progressed between now and next meeting.

***Conclusion:*** Revised to S1-220209

[S1-220209](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220209.zip) from Xiaomi: ***New SID on 5GS supporting Mobile User Service*** (SID new)

***Summary:*** Revision of S1-220148

***Discussion:*** Revision of S1-220148.

***Conclusion:*** Noted

[**S1-220145**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220145.zip) from Beijing Xiaomi Software Tech: ***Discussion for Study on 5GS supporting for Mobile User Service (FS\_5GMUS)*** (discussion)

***Summary:*** R2 presented.

The main use cases of MUS are Phone number Searching, Advertisement delivering, Auth & Auth service.

The objective of this SID is to study 5G system supporting Mobile User Service as:

- To identify the potential use cases and requirements for Mobile User Service

- To identify the potential requirements for privacy and security of Mobile User Service

Etc

***Discussion:*** Huawei and Ericsson do not support, because the scope of this SID is not enough focussed, in their view. There are too many involved parties in the proposal (3rd parties, etc).

***Conclusion:*** Noted

## 4.26 SID on FS\_RAILSS [Continuation from Rel18]

[S1-220161](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220161.zip) from Hansung University: ***RAILSS activity planning*** (discussion)

***Summary:*** To discuss the future RAILSS action, this input tries to share a plan for the RAILSS activity

R1 presented

2 possibilties on how to continue FS\_RAILSS work in Railway domain Wis in Rel19

Option#1: create a new Rel-19 SID (e.g., FS\_RAILSS\_Ph2) to be presented in ongoing SA1#97e (if permitted by SA1 leadership as late contribution)

Option#2: include RAILSS objectives as part of new Rel-19 FS\_eFRMCS2 (FS\_FRMCS\_Ph3) objectives

***Discussion:*** Rev2:

New timeline proposed.

revised WID to be detached from this zip pack in S1-220180

Last day: rev 3: now it is just one slide, which states:

Continue FS\_RAILSS work

Create a revision of SID with rescheduling due dates (Two more slots): Please see S1-220180

Proposed schedules

For information: SA1#98-e (2022.05)

For approval: SA1#99-e (2022.08)

Kindly ask SA1 to approve the SID

Possible RAILSS use cases (approx. 6~8 cases):

Passenger services

Security and monitoring of the station by AI technology

Security and monitoring of the station by 3D/AR/VR technology

Enhance existing use cases (from UIC and TTA for example) and adopt them

No objection on this plan.

***Conclusion:*** Noted

[S1-220180](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220180.zip) from Hansung University, LGU, KT, SK Telecom, ETRI, LGE, UIC: ***Revised WID: Study on Supporting of Railway Smart Station*** (WID revised)

***Summary:*** From 161r2

***Discussion:*** Not needed, only timeline is re-scheduled.

Qualcomm does not see why this SID would be agreed in SA1 while all the other SIDs are to be agreed in May. The Chair, MCC, the ex-SA chair clarified that the main difference is that this SID is already approved since Rel-18, it is just to update the timeline.

CC larified that the timeline for this SID can also be updated via the chair's report to SA, there is no need to revise this SID.

***Conclusion:*** Noted

[S1-220066](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220066.zip) from Kyonggi University: ***Addition of definition regarding location with minor editorial correction in Definitions*** (CR to [**22.280**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3017) #0150 cat B v.18.0.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**RAILSS**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850044))

***Summary:*** This is for including agreed definition via transfer of text from TR 22.890 to TS 22.280.

***Discussion:*** Moved from 6.1 WI code RAILSS Rel-18 CR0150R- Cat B

***Conclusion:*** Noted

[S1-220067](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220067.zip) from Kyonggi University: ***Addition of one requirement regarding location based mission critical service*** (CR to [**22.280**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3017) #0151 cat B v.18.0.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**RAILSS**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850044))

***Summary:*** This is for including agreed requirement regarding location via transfer of text from TR 22.890 to TS 22.280.

***Discussion:*** Moved from 6.1 WI code RAILSS Rel-18 CR0151R- Cat B

***Conclusion:*** Noted

[**S1-220155**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220155.zip) from Hansung University, LGUplus, KT, ETRI: ***Pseudo-CR on suggesting definitions of RAILSS*** (pCR)

***Summary:*** Suggest definitions of RAILSS

***Discussion:*** Moved from 6.1

***Conclusion:*** Noted

[**S1-220156**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220156.zip) from Hansung University, LGUplus, KT, ETRI: ***Pseudo-CR on suggesting contents for overview of TR22.890*** (pCR)

***Summary:*** This pCR suggests overview of TR22.890

***Discussion:*** Moved from 6.1

***Conclusion:*** Noted

## 4.27 WIDs with no corresponding SIDs ("MiniWIDs")

[S1-220068](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220068.zip) from Saankhya Labs, IIT Bombay: ***Usage of Non-3GPP NTN for Multicast Broadcast Services (MBS) in 5GS*** (WID new)

***Summary:*** Update the stage 1 specifications to allow “the usage of non-3GPP satellite access (NTN) for multicast broadcast service in 5GS”.

***Discussion:*** Nokia, Sony, Qualcomm, Huawei, wonder if this could be integrated in the Satellite\_Phase 3 work item. Also, some companies think that there is no need for a Study for this topic.

A mini-WID might be proposed instead, at a future meeting.

New number to be given for r3.

***Conclusion:*** Revised to S1-220211

[S1-220211](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220211.zip) from Saankhya Labs and IIT Bombay: ***New WID on Usage of Non-3GPP NTN for Multicast Broadcast Services in 5GS*** (WID new)

***Summary:*** Revision of S1-220068

***Discussion:*** Revision of S1-220068.

***Conclusion:*** Noted

[S1-220167](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220167.zip) from Saankhya Labs, IIT Bombay, Ligado Networks, One Media 3.0, Fraunhofer IIS, CEWiT, Tejas Networks, IIT Kanpur, IIT Madras, IIT Hyderabad, IIT Kharagpur: ***Usage of Non-3GPP NTN (Satellite access network) for Multicast Broadcast Services in 5GS*** (CR to **22.261 #**0638 cat B v.18.5.0, **Rel-19, WID: 5GSAT)**

***Summary:*** R2 presented.

The CR adds the sentence: "A 5G satellite access network supporting multicast/broadcast may include either a 3GPP satellite NG-RAN or a non-3GPP satellite access network, or both."

***Discussion:*** For Huawei, Satellite is already supported, there is no need to add this sentence.

The Chair proposes to have discussions with satellite industry in SA1.

For Saankhya Labs, the new thing proposed here is the combination satellite and terrestrial.

For Qualcomm and Apple, the Rel-19 (mini) WIDs should not be handled at this meeting.

New number to be given for r3.

***Conclusion:*** Revised to S1-220212

[S1-220212](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220212.zip) from Saankhya Labs, IIT Bombay, Ligado Networks, One Media 3.0, Fraunhofer IIS, CEWiT, Tejas Networks, IIT Kanpur, IIT Madras, IIT Hyderabad, IIT Kharagpur, Reliance Jio, Lockheed Martin Corporation: ***Usage of Non-3GPP NTN (Satellite access network) for Multicast Broadcast Services in 5GS*** (CR to **22.261 #**0638r1 cat B v.18.5.0, **Rel-19, WID: Sat4MBS)**

***Summary:*** Revision of S1-220167

***Discussion:*** Revision of S1-220167.

***Conclusion:*** Noted

[S1-220166](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220166.zip) from Saankhya Labs, IIT Bombay: ***Usage of Non-3GPP NTN for Multicast Broadcast Services in 5GS*** (discussion)

***Summary:*** R1 presented.

TS 22.261 does not clearly specify if non-3GPP satellite access can be used for multicast/broadcast service in 5GS.

***Discussion:*** Company contributions in 69 (WID) and 167 (CR).

***Conclusion:*** Revised to S1-220213

[S1-220213](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220213.zip) from Saankhya Labs, IIT Bombay: ***Usage of Non-3GPP NTN for Multicast Broadcast Services in 5GS*** (discussion)

***Summary:*** Revision of S1-220166

***Discussion:*** Revision of S1-220166.

***Conclusion:*** Noted

[S1-220069](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220069.zip) from Saankhya Labs, IIT Bombay: ***Usage of Non-3GPP DTT Broadcast Networks for Multicast/Broadcast Services (MBS) in 5GS*** (WID new)

***Discussion:*** DTTB4MBS

***Conclusion:*** Noted

[S1-220169](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220169.zip) from Saankhya Labs, IIT Bombay, Hewlett-Packard Enterprise, Ligado Networks, One Media 3.0, Fraunhofer IIS, CEWiT, Tejas Networks, IIT Kanpur, IIT Madras, IIT Hyderabad, IIT Kharagpur: ***Usage of Non-3GPP DTT Broadcast Networks for Multicast/Broadcast Services in 5GS*** (CR to **22.261 #**0639 cat B v.18.5.0, **Rel-19, WID: 5MBS)**

***Discussion:*** DTTB4MBS WI code XXXX Rel-19 CR0639R- Cat X

***Conclusion:*** Noted

[S1-220168](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220168.zip) from Saankhya Labs, IIT Bombay: ***Usage of Non-3GPP Digital Terrestrial Broadcast Networks for Multicast Broadcast Services in 5GS*** (discussion)

***Discussion:*** DTTB4MBS

***Conclusion:*** Noted

[**S1-220160**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220160.zip) from TNO, one2many: ***New WID on Device Based Geofencing for EU-ALERT*** (WID new)

***Summary:*** The objective of the WID is to specify that device based geofencing is also a requirements for EU-alert. This is done by copying the CMAS specific requirements text on device based geofencing into the EU-alert specific section.

Note that the intention is not to add requirements for new technical functionality; the support for device based geofencing is already specified for CMAS.

***Discussion:*** This WID is not needed since the CR will now be presented as Rel-18.

***Conclusion:*** Noted

[S1-220010](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220010.zip) from TNO, KPN, one2many, MINEA, Netherlands Police, BMWi, SyncTechno Inc., Erillisverkot: ***Device based geo-fencing for EU-alert*** (CR to [**22.268**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=639) #0068r  cat B v.16.4.0, [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194), WID: DUMMY)

***Summary:*** This CR copies requirements for device based geofencing from the CMAS specific section to the EU-alert specific section to make them applicable also for EU-alert

WID: GEOFEU

***Discussion:*** For Qualcomm and Apple, the Rel-19 (mini) WIDs should not be handled at this meeting.

This could be a Rel-18 (TEI-18) CR, since it is already implemented.

For Samsung, a cat. B for Rel-18 has to be seen by the SA plenary since Rel-18 is frozen.

Nokia support to go for Rel-18 CR (TEI18).

Qualcomm and Apple need more time to check the consequences of having it to Rel-18.

2nd week: this will go directly to SA plenary. TNO is not sure at this stage whether they are going to present it to SA as Rel-18 (TEI) or to Rel-19 (and then propose a corresponding mini-WID).

Huawei strongly support to have it as Rel-19, since it has impacts on the terminals.

MCC clarified that Rel-18 CRs are allowed as long as the Rel-18 is not entirely closed (i.e. as long as Stage 3 is still open).

To be progressed off-line between now and SA.

***Conclusion:*** Noted

# 5 Quality improvement contributions

[S1-220043](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220043.zip) from China Mobile: ***Non-inclusive language replacement*** (CR to [**22.262**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3558) #0002r  cat D v.17.0.0, [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192), WID: [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047))

***Discussion:*** 0043r1 agreed

***Conclusion:*** Revised to S1-220214

[S1-220214](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220214.zip) from China Mobile: ***22.262v17.0.0 Non-inclusive language replacement*** (CR to **22.262 #**0002r1 cat D v.17.0.0, **Rel-17, WID: TEI17)**

***Summary:*** Revision of S1-220043

***Discussion:*** Same as 0043 Revision of S1-220043.

***Conclusion:*** Agreed

[**S1-220136**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220136.zip) from Huawei: ***Editorial corrections to TS 22.125 on UAV*** (CR to [**22.125**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3545) #0043 cat D v.17.5.0, [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192), WID: [**ID\_UAS**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=810049))

***Discussion:*** 0136r1 pre-agreed

***Conclusion:*** Revised to S1-220215

[S1-220215](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220215.zip) from Huawei: ***Editorial corrections to TS 22.125 on UAV*** (CR to **22.125 #**0043r1 cat D v.17.5.0, **Rel-17, WID: ID\_UAS)**

***Summary:*** Revision of S1-220136

***Discussion:*** Same as 0136r1 Revision of S1-220136.

***Conclusion:*** Agreed

[S1-220100](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220100.zip) from Huawei: ***Editorial corrections for quality improvement*** (CR to [**22.847**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3848) #0014 cat D v.18.1.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**FS\_TACMM**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900027))

***Discussion:*** 0100r1 agreed

***Conclusion:*** Revised to S1-220216

[S1-220216](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220216.zip) from Huawei: ***Editorial corrections for quality improvement*** (CR to **22.847 #**0014r1 cat D v.18.1.0, **Rel-18, WID: FS\_TACMM)**

***Summary:*** Revision of S1-220100

***Discussion:*** Same as 0100r1 Revision of S1-220100.

***Conclusion:*** Agreed

[S1-220101](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220101.zip) from Huawei: ***Update the use of may and can for quality improvement*** (CR to [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) #0632 cat D v.18.5.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**TEI18**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920042))

***Discussion:*** Is this really category D?

Rev3 available, then further improvements proposed.

Rev5 agreed.

***Conclusion:*** Revised to S1-220217

[S1-220217](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220217.zip) from Huawei: ***Update the use of may and can for quality improvement*** (CR to **22.261 #**0632r1 cat F v.18.5.0, **Rel-18, WID: TEI18)**

***Summary:*** Revision of S1-220101

***Discussion:*** Same as 0101r5 Revision of S1-220101.

***Conclusion:*** Agreed

[S1-220104](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220104.zip) from Huawei: ***Clean-up of the references for quality improvement*** (CR to [**22.011**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=566) #0330 cat D v.18.1.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**TEI18**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920042))

***Conclusion:*** Agreed

# 6 Rel-18 and earlier contributions

## 6.1 Rel-18 correction and clarification CR on general topicss

[S1-220015](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220015.zip) from UIC, Nokia, Kontron Transportation France, KRRI, FirstNet, Hansung University, Samsung: ***Enhanced MCX Service Ad hoc Group Communication to support Railway needs*** (CR to [**22.280**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3017) #0149r  cat C v.18.0.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**TEI18**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900026))

***Summary:*** An existing requirement is clarified and a new requirement is added that allows the list of users to be determined by other means based on pre-defined criteria (e.g., location).

***Discussion:*** Maybe other Wi Code? FS\_eFRMCS?

***Conclusion:*** Agreed

[S1-220033](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220033.zip) from UIC: ***Adding MCX Service Ad hoc Group Communication as alternative capability to support Railway Emergency Communication*** (CR to [**22.989**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3109) #0012r  cat B v.18.3.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**TEI18**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900026))

***Discussion:*** Maybe other Wi Code? FS\_eFRMCS?

Rev1 agreed.

***Conclusion:*** Revised to S1-220218

[S1-220218](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220218.zip) from UIC: ***Adding MCX Service Ad hoc Group Communication as alternative capability to support Railway Emergency Communication*** (CR to **22.989 #**0012r1 cat B v.18.3.0, **Rel-18, WID: FS\_eFRMCS)**

***Summary:*** Revision of S1-220033

***Discussion:*** Same as 033r1 Revision of S1-220033.

***Conclusion:*** Agreed

[S1-220040](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220040.zip) from Ericsson LM: ***Clarification of terminology for localized services*** (CR to [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) #0630r  cat F v.18.5.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**PALS**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920031))

***Summary:*** The CR replaces ‘service operator’ by ‘service provider’

***Discussion:*** Qualcomm to be added.

R1 agreed

***Conclusion:*** Revised to S1-220219

[S1-220219](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220219.zip) from Ericsson: ***22.261v18.5.0 Clarification of terminology for localized services*** (CR to **22.261 #**0630r1 cat F v.18.5.0, **Rel-18, WID: PALS)**

***Summary:*** Revision of S1-220040

***Discussion:*** 0040r1 (adding Qualcomm) Revision of S1-220040.

***Conclusion:*** Agreed

[S1-220093](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220093.zip) from Qualcomm: ***Correction to CPN Requirements*** (CR to [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) #0631 cat F v.18.5.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**PIRATES**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=930022))

***Summary:*** Rev2 presented.

This CR clarifies that PWS requirement should not apply to UEs with non-3GPP access (WLAN)

***Discussion:*** R2 agreed

***Conclusion:*** Revised to S1-220220

[S1-220220](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220220.zip) from Qualcomm: ***Correction to CPN Requirements*** (CR to **22.261 #**0631r1 cat F v.18.5.0, **Rel-18, WID: PIRATES)**

***Summary:*** Revision of S1-220093

***Discussion:*** Same as 0220r2 Revision of S1-220093.

***Conclusion:*** Agreed

[S1-220114](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220114.zip) from NTT DOCOMO INC.: ***Addition of requirement to utilize a widely-used mechanism for authorization at northbound API*** (CR to [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) #0637 cat F v.18.5.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**SNA**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=890024))

***Summary:*** Rev1 presented.

The CR adds:

"When external authorization is required to access an API or a data set exposed by the 5G system, the 5G system shall provide a mechanism for the authorization that relies on a well-specified, widely-used technology."

***Discussion:*** Qualcomm has concerns with this statement, that they find unclear and unusable for Stages 2 and 3.

To be continued off-line, after this meeting, between at least Qualcomm and NTT DoCoMo.

***Conclusion:*** Noted

## 6.2 Rel-18 correction and clarification CR on AMMT

[S1-220103](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220103.zip) from OPPO: ***Clarification of KPI in TR22.874 FS\_AMMT*** (CR to [**22.874**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3721) #0007 cat B v.18.2.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**AMMT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860009))

***Summary:*** The CR adds round-trip latency with certain UL and DL payload size for use case “split control for robotics”

***Discussion:*** Wrong title CR

***Conclusion:*** Noted

[S1-220105](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220105.zip) from OPPO: ***Clarification of KPI in TS22.261 clause 7.10 for AMMT use case*** (CR to [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) #0633 cat B v.18.5.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**AMMT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920030))

***Summary:*** Clarify the round-trip latency with certain UL and DL data size for use case “split control for robotics” in 7.10 TS22.261.

***Discussion:*** For Qualcomm, Nokia and Huawei, this is not Cat. F, it should be Cat.B, and then it should be Rel-19.

Delegates asked if they prefer r2 or r3.r3 is preferred, but still some minor typos (spaces, etc) to be corrected.

Rev4 agreed.

***Conclusion:*** Revised to S1-220221

[S1-220221](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220221.zip) from OPPO, Kyonggi University: ***Clarification of KPI in TS22.261 clause 7.10 for AMMT use case*** (CR to **22.261 #**0633r1 cat F v.18.5.0, **Rel-18, WID: AMMT)**

***Summary:*** Revision of S1-220105

***Discussion:*** Same as 0105r4 Revision of S1-220105.

***Conclusion:*** Agreed

[S1-220107](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220107.zip) from OPPO: ***Clarification of 5GC assistance for FL member selection*** (CR to [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) #0634 cat B v.18.5.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193), WID: [**AMMT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920030))

***Summary:*** Clarify the requirement of 5GS assisted FL member selection into 22.261

R1 presented

Discussion: R2: category corrected to be "F". Several minor enhancements still needed.

Rev3 agreed.

***Conclusion:*** Revised to S1-220222

[S1-220222](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220222.zip) from OPPO: ***Clarification of 5GC assistance for FL member selection*** (CR to [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) **#**0634r1 cat F v.18.5.0, [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193)**, WID:** [**AMMT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920030)**)**

***Summary:*** Revision of S1-220107

***Discussion:*** Same as 0107r3 Revision of S1-220107.

***Conclusion:*** Agreed

## 6.3 Release 17 Alignment CRs

There was no contribution for this agenda item.

## 6.4 Rel-17 and earlier CRs (other than alignment)

[S1-220125](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220125.zip) from BDBOS, FirstNet, MINISTERE DE L'INTERIEUR, Netherlands Police: ***Clarification on use of MCPTT Late call entry KPIs*** (CR to [**22.179**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=623) #0075 cat F v.17.0.0, [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192), WID: [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047))

***Summary:*** The CR clarifies the use of MCPTT Late call entry KPIs for terrestrial use.

***Discussion:*** R1 corrects the WI code.

Rev1 agreed.

***Conclusion:*** Revised to S1-220223

[S1-220223](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220223.zip) from BDBOS, FirstNet, Netherlands Police, MINISTERE DE L'INTERIEUR: ***Clarification on use of MCPTT Late call entry KPIs*** (CR to **22.179 #**0075r1 cat F v.17.0.0, **Rel-17, WID: TEI17, MCPTT)**

***Summary:*** Revision of S1-220125

***Discussion:*** Same as 0125r1 Revision of S1-220125.

***Conclusion:*** Agreed

# 7 Other technical contributions

There was no contribution for this agenda item.

# 8 Other non-technical contributions

[S1-220085](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220085.zip) from Samsung, Deutsche Telekom: ***Considerations on Application Requirements in SA1*** (discussion)

***Summary:*** This proposal suggests that, as SA1 has successfully defined 3GPP standardized application requirements in the past, this can be pursued again, explicitly, in the future. It also considers aspects of this process.

Rev3 presented

***Discussion:*** Nokia support the overall idea, but the wording has to be precise: these are not the applications that should be provided but the context to best support the applications.

For Deutsche Telekom, 3GPP has defined application-level requirements, e.g. for V2X. This might not be clearly reflected in rev3.

For Huawei, the proposal has to be reworded to make it easier to understand, e.g. using conjugated verbs.

Samsung clarified that their request is that the following sentence is not used: "We can't talk about application in SA1".

***Conclusion:*** Noted

# 9 Next meetings

## 9.1 Calendar

**22 meetings:**

**SA1#98 09-19 May 2022 e-meeting**

**SA1#99 22-26 Aug 2022 Europe**

**SA1#100 07-11 Nov 2022 North America (dates and location T.B.D.)**

# 10 Any other business

There was no contribution for this agenda item.

# 11 Close

The chairman and ETSI MCC closed the meeting at 5:00 PM UTC on Thursday 24th February 2022, and the deadline for latest version upload was set to Friday 25th February 11PM UTC.

They thanked all the delegates for their work and their positive attitude.

# Annexes

## Annex A: List of contribution documents

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tdoc # | Source | ***Title*** | Type | Spec | CR# | r | cat | Versionin | Rel | WI |
| [S1-220000](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220000.zip) | SA1 Chairman | ***1st Draft Agenda for SA1#97-e*** | agenda |  |  |  |  |  |  |  |
| [S1-220001](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220001.zip) | SA1 Chairman | ***1st Draft Agenda for SA1#97-e*** | agenda |  |  |  |  |  |  |  |
| [S1-220002](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220002.zip) | SA1 Chair | ***Agenda for SA1#97e with tdoc allocation*** | agenda |  |  |  |  |  |  |  |
| [S1-220003](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220003.zip) | SA1 Chair, MCC | ***Guidelines for SA1#97e (e-meeting)*** | other |  |  |  |  |  |  |  |
| [S1-220004](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220004.zip) | other | ***Draft minutes of SA1#96e*** | report |  |  |  |  |  |  |  |
| [S1-220005](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220005.zip) | ETSI | ***Minutes of SA1#96e*** | report |  |  |  |  |  |  |  |
| [S1-220006](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220006.zip) | ETSI MCC | ***Extract of the 3GPP Work Plan for SA1#97e*** | Work Plan |  |  |  |  |  |  |  |
| [S1-220007](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220007.zip) | SA1 Chairperson | ***SA1-related topics at SA#94e*** | report |  |  |  |  |  |  |  |
| [S1-220008](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220008.zip) | ETSI | ***MCC Guidelines on writing a CR*** | other |  |  |  |  |  |  |  |
| [S1-220009](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220009.zip) | SA1 Chair | ***Preparation for SA1#97e*** | other |  |  |  |  |  |  |  |
| [S1-220010](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220010.zip) | TNO, KPN, one2many, MINEA, Netherlands Police, BMWi, SyncTechno Inc., Erillisverkot | ***Device based geo-fencing for EU-alert*** | CR | [**22.268**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=639) | 0068 |  | B | 16.4.0 | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) | DUMMY |
| [S1-220011](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220011.zip) | China Mobile | ***New SID on 5G enabling naked eye holography service*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220012](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220012.zip) | China Mobile Com. Corporation | ***5G enabling naked eye holography service*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220013](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220013.zip) | China Unicom, China Telecom | ***New study on network sharing in 5GS*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220014](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220014.zip) | China Unicom | ***Update of Discussion paper of network sharing in 5G*** | SID new |  |  |  |  |  |  |  |
| [S1-220015](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220015.zip) | UIC, Nokia, Kontron Transportation France, KRRI, FirstNet, Hansung University, Samsung | ***Enhanced MCX Service Ad hoc Group Communication to support Railway needs*** | CR | [**22.280**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3017) | 0149 |  | C | 18.0.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**TEI18**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900026) |
| [S1-220016](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220016.zip) | China Unicom | ***Discussion on Data Integrity Service in IOT of S3 LS*** | discussion |  |  |  |  |  | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) |  |
| [S1-220017](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220017.zip) | China Unicom | ***LS to 3GPP SA3 (cc 3GPP SA6) on [Draft] of Reply LS to SA3 on Discussion on Data Integrity Service in IoT*** | LS out |  |  |  |  |  | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) |  |
| [S1-220018](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220018.zip) | UIC, KT, LGUplus, ETRI, Kyunggi University, Hansung University, | ***New study on FRMCS Evolution Phase 2*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220019](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220019.zip) | Union Inter. Chemins de Fer | ***Motivation for Rel-19 SID proposal on FS\_eFRMCS2*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220020](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220020.zip) | Thales, TNO, ESA, Gatehouse, Sateliot, Hughes Network | ***Additional satellite capabilities for Rel-19*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220021](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220021.zip) | ZTE Corporation | ***Discussion paper for 5G enabled Distributed Data Management*** | discussion |  |  |  |  |  |  |  |
| [S1-220022](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220022.zip) | ZTE Corporation, CEPRI, China Telecom, China Unicom | ***New study on 5G enabled Distributed Data Management*** | SID new |  |  |  |  |  |  |  |
| [S1-220023](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220023.zip) | ZTE | ***FS\_DDM: TR 22.XXX skeleton*** | other |  |  |  |  |  |  |  |
| [S1-220024](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220024.zip) | ZTE Corporation | ***Discussion: Mesh based Local Communication Service*** | discussion |  |  |  |  |  |  |  |
| [S1-220025](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220025.zip) | ZTE Corporation, China Telecom | ***New study on Mesh based Local Communication Service*** | SID new |  |  |  |  |  |  |  |
| [S1-220026](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220026.zip) | ZTE | ***FS\_MeshLCS: TR 22.XXX skeleton*** | other |  |  |  |  |  |  |  |
| [S1-220027](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220027.zip) | vivo | ***Discussion on mobile computation force network*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220028](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220028.zip) | vivo | ***Discussion on Passive IoT*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220029](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220029.zip) | vivo | ***Discussion on Network based Sensing Service*** | discussion |  |  |  |  |  |  |  |
| [S1-220030](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220030.zip) | vivo | ***Discussion on Personal IoT Networks with vehicles in roaming*** | discussion |  |  |  |  |  |  |  |
| [S1-220031](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220031.zip) | vivo | ***New SID on Personal IoT Networks with vehicles in roaming scenarios*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220032](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220032.zip) | China Telecomunication Corp. | ***Discussion paper on mobile Computing Aware Network*** | discussion |  |  |  |  |  |  |  |
| [S1-220033](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220033.zip) | UIC | ***Adding MCX Service Ad hoc Group Communication as alternative capability to support Railway Emergency Communication*** | CR | [**22.989**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3109) | 0012 |  | B | 18.3.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**TEI18**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900026) |
| [S1-220034](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220034.zip) | China Telecom | ***New SID on Support for Minimization of Service Interruption during*** | SID new |  |  |  |  |  |  |  |
| [S1-220035](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220035.zip) | China Telecom Corporation Ltd. | ***Discussion Paper on Support for Minimization of Service Interruption during Core Network Failure*** | discussion |  |  |  |  |  |  |  |
| [S1-220036](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220036.zip) | China Telecom | ***Skeleton on Support for Minimization of Service Interruption during Core Network Failure*** | other |  |  |  |  |  |  |  |
| [S1-220037](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220037.zip) | OPPO | ***TR skeleton for potential R19 study on UE-Network coordinated AI/ML ServiceFS\_ UNAS: TR 22.xxx skeleton*** | discussion |  |  |  |  |  | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) |  |
| [S1-220038](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220038.zip) | OPPO | ***Discussion on UE-Network coordinated AI/ML Service*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220039](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220039.zip) | OPPO | ***New WID on study on UE-Network coordinated AI/ML Service*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220040](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220040.zip) | Ericsson LM | ***Clarification of terminology for localized services*** | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0630 |  | F | 18.5.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**PALS**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920031) |
| [S1-220041](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220041.zip) | China Mobile Com. Corporation | ***pCR FS\_NEHS Skeleton*** | discussion |  |  |  |  |  |  |  |
| [S1-220042](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220042.zip) | China Mobile | ***pCR FS\_NEHS Scope*** | discussion |  |  |  |  |  |  |  |
| [S1-220043](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220043.zip) | China Mobile | ***Non-inclusive language replacement*** | CR | [**22.262**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3558) | 0002 |  | D | 17.0.0 | [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192) | [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047) |
| [S1-220044](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220044.zip) | BOARDTREND(21)010005r2 | ***ETSI Technology Radar, status and request for feed-back*** | LS in |  |  |  |  |  |  |  |
| [S1-220045](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220045.zip) | C1-217150 | ***Use, if any, of network provided "Indication of country of UE location"*** | LS in |  |  |  |  |  |  |  |
| [S1-220046](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220046.zip) | C1-217163 | ***LS on Using CP-SOR as a secured information transfer mechanism between HPLMN and UE*** | LS in |  |  |  |  |  |  |  |
| [S1-220047](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220047.zip) | C1-217358 | ***LS on the User Controlled PLMN Selector with Access Technology in Control plane solution for steering of roaming in 5GS*** | LS in |  |  |  |  |  |  |  |
| [S1-220048](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220048.zip) | C1-217451 | ***LS on validity of cause value #78*** | LS in |  |  |  |  |  |  |  |
| [S1-220049](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220049.zip) | C1-220816 | ***LS on MINT and Higher priority PLMN Selection*** | LS in |  |  |  |  |  |  |  |
| [S1-220050](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220050.zip) | GSMA ESTF 02\_102r1 | ***LS informing partner groups of ESTF creation*** | LS in |  |  |  |  |  |  |  |
| [S1-220051](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220051.zip) | BBF LIAISE-483 | ***Alignment concerning 5G RG requirements and its remote management*** | LS in |  |  |  |  |  |  |  |
| [S1-220052](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220052.zip) | GSMA NRG\_012\_204 | ***LS reply from NRG to 3GPP on IMS emergency communication improvement - SMS*** | LS in |  |  |  |  |  |  |  |
| [S1-220053](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220053.zip) | R2-2201841 | ***Reply LS on UAC enhancements and system information extensions for minimization of service interruption*** | LS in |  |  |  |  |  |  |  |
| [S1-220054](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220054.zip) | S2-2109254 | ***Reply LS on limited service availability of an SNPN*** | LS in |  |  |  |  |  |  |  |
| [S1-220055](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220055.zip) | S3-214336 | ***Reply to LS on broadcast of NTN GW or gNB position*** | LS in |  |  |  |  |  |  |  |
| [S1-220056](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220056.zip) | S3-214337 | ***LS on reply to SA6 about new SID on Application Enablement for Data Integrity Verification Service in IOT*** | LS in |  |  |  |  |  |  |  |
| [S1-220057](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220057.zip) | S5-216412 | ***Reply LS on Prioritized Vehicle to Cloud Technical Solutions (Automotive Edge Computing Consortium (AECC))*** | LS in |  |  |  |  |  |  |  |
| [S1-220058](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220058.zip) | S6-212694 | ***LS on ad hoc group communication*** | LS in |  |  |  |  |  |  |  |
| [S1-220059](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220059.zip) | S6-212805 | ***Reply LS on Private call forwarding*** | LS in |  |  |  |  |  |  |  |
| [S1-220060](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220060.zip) | ITU SG15-LS348 | ***LS/r on Time Synchronization support in 3GPP specification (reply to 3GPP TSG SA2-2106786-LS02)*** | LS in |  |  |  |  |  |  |  |
| [S1-220061](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220061.zip) | ITU / SP-211247 | ***APT REPORT ON EMERGING CRITICAL APPLICATIONS & USE CASES OF IMT FOR INDUSTRIAL, SOCIETAL AND ENTERPRISE USERS*** | LS in |  |  |  |  |  |  |  |
| [S1-220062](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220062.zip) | ITU / SP-211412 | ***LS from ITU-R WP5D: Development of a draft new Report ITU-R M.[IMT.INDUSTRY] -Applications of IMT for specific societal, industrial and enterprise usages. To be forward to SA WG1*** | LS in |  |  |  |  |  |  |  |
| [S1-220063](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220063.zip) | SP-211621 | ***LS on Energy Efficiency as guiding principle for new solutions*** | LS in |  |  |  |  |  |  |  |
| [S1-220064](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220064.zip) | GSMA TSG46\_028 | ***Reply LS on IMEI for Non-Public Networks/Private Networks without using USIM*** | LS in |  |  |  |  |  |  |  |
| [S1-220065](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220065.zip) | S5-221501 | ***Reply LS on energy efficiency as guiding principle for new solutions*** | LS in |  |  |  |  |  |  |  |
| [S1-220066](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220066.zip) | Kyonggi University | ***Addition of definition regarding location with minor editorial correction in Definitions*** | CR | [**22.280**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3017) | 0150 |  | B | 18.0.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**RAILSS**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850044) |
| [S1-220067](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220067.zip) | Kyonggi University | ***Addition of one requirement regarding location based mission critical service*** | CR | [**22.280**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3017) | 0151 |  | B | 18.0.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**RAILSS**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850044) |
| [S1-220068](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220068.zip) | Saankhya Labs, IIT Bombay | ***Usage of Non-3GPP NTN for Multicast Broadcast Services (MBS) in 5GS*** | WID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220069](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220069.zip) | Saankhya Labs, IIT Bombay | ***Usage of Non-3GPP DTT Broadcast Networks for Multicast/Broadcast Services (MBS) in 5GS*** | WID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220070](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220070.zip) | China Telecom | ***New study on Live Migratable Services in the 5G System*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220071](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220071.zip) | China Telecommunications | ***Discussion on Live Migratable Services in the 5G System*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220072](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220072.zip) | China Mobile Com. Corporation, China Telecom, vivo | ***New SID on supporting computing aware network*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220073](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220073.zip) | China Telecom | ***LMS: TR 22.XXX skeleton*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220074](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220074.zip) | China Mobile Com. Corporation | ***Motivation of supporting computing aware network*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220075](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220075.zip) | China Mobile | ***New SID on Study on System Enhancement for Reducing Carbon Emission*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220076](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220076.zip) | China Mobile Com. Corporation | ***Motivation of study on System Enhancement for Reducing Carbon Emission*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220077](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220077.zip) | China Telecom | ***New SID on Enhancement of Relay Communication for eMBB*** | SID new |  |  |  |  |  |  |  |
| [S1-220078](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220078.zip) | China Mobile | ***TR Skeleton of New SID on supporting computing aware network*** | other |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220079](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220079.zip) | China Mobile | ***TR Skeleton of New SID on System Enhancement for Reducing Carbon Emission*** | other |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220080](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220080.zip) | China Telecom Corporation Ltd. | ***Discussion on Enhancement of Relay Communication for eMBB*** | discussion |  |  |  |  |  |  |  |
| [S1-220081](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220081.zip) | China Telecom | ***TR skeleton of Study on Enhancement of Relay Communication for eMBB*** | other |  |  |  |  |  |  |  |
| [S1-220082](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220082.zip) | China Mobile Com. Corporation | ***Discussion on traffic scheduling in terrestrial and satellite converged network*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220083](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220083.zip) | Samsung | ***[Draft] Reply LS to CT1 on MINT and Higher priority PLMN Selection*** | LS out |  |  |  |  |  | [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192) | [**MINT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850045) |
| [S1-220084](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220084.zip) | Samsung | ***Concerning Reply LS on MINT and Higher priority PLMN Selection*** | discussion |  |  |  |  |  | [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192) | [**MINT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850045) |
| [S1-220085](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220085.zip) | Samsung, Deutsche Telekom | ***Considerations on Application Requirements in SA1*** | discussion |  |  |  |  |  |  |  |
| [S1-220086](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220086.zip) | Samsung, LG Uplus, Tencent, KDDI, Orange, Dish Network, KT Corp, FirstNet, | ***New WID on Feasibility Study on Mobile Metaverse Services*** | SID new |  |  |  |  |  |  |  |
| [S1-220087](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220087.zip) | Samsung | ***Mobile Metaverse Services*** | discussion |  |  |  |  |  |  |  |
| [S1-220088](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220088.zip) | Samsung | ***Draft Skeleton for TR for Study on Mobile Metaverse Services*** | other |  |  |  |  |  |  |  |
| [S1-220089](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220089.zip) | Samsung | ***Pseudo-CR on Scope for the FS\_Metaverse TR*** | other |  |  |  |  |  |  |  |
| [S1-220090](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220090.zip) | Lenovo, Motorola Mobility | ***LS to RAN2; contact: Nokia) (cc SA1, SA2) on Discussion on support of disaster roaming by PNI-NPN with CAG*** | LS out |  |  |  |  |  | [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192) | [**MINT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=930003) |
| [S1-220091](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220091.zip) | Lenovo [to be SA1] | ***LS to RAN2, CT1 on Draft Reply LS on support of disaster roaming by PNI-NPN with CAG*** | LS out |  |  |  |  |  | [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192) | [**MINT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=930003) |
| [S1-220092](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220092.zip) | Nokia, Nokia Shanghai Bell | ***reply LS to SA3, SA6 (cc SA) on reply to SA6 about new SID on Application Enablement for Data Integrity Verification Service in IOT*** | LS out |  |  |  |  |  |  |  |
| [S1-220093](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220093.zip) | Qualcomm | ***Correction to CPN Requirements*** | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0631 |  | F | 18.5.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**PIRATES**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=930022) |
| [S1-220094](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220094.zip) | Qualcomm Austria RFFE GmbH | ***Cooperative Sensing and Communication - Motivations*** | other |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220095](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220095.zip) | Peraton Labs, CISA, T-Mobile US, Verizon, AT&T | ***New WID on Feasibility Study on MPS for Text Messages*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220096](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220096.zip) | Peraton Labs | ***Presentation of New WID on Feasibility Study on MPS for Text Messages*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220097](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220097.zip) | Peraton Labs, CISA, T-Mobile US, Verizon, AT&T | ***Skeleton for Feasibility Study on MPS for Text Messages*** | SID new |  |  |  |  |  |  |  |
| [S1-220098](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220098.zip) | Xiaomi | ***Discussion on satellite enhancement for Rel-19*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220099](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220099.zip) | Reliance Jio | ***New SID on 5G Enabled Open-SON*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220100](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220100.zip) | Huawei | ***Editorial corrections for quality improvement*** | CR | [**22.847**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3848) | 0014 |  | D | 18.1.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**FS\_TACMM**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900027) |
| [S1-220101](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220101.zip) | Huawei | ***Update the use of may and can for quality improvement*** | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0632 |  | D | 18.5.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**TEI18**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920042) |
| [S1-220102](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220102.zip) | Reliance Jio | ***5G Enabled Open-SON*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220103](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220103.zip) | OPPO | ***Clarification of KPI in TR22.874 FS\_AMMT*** | CR | [**22.874**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3721) | 0007 |  | B | 18.2.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**AMMT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860009) |
| [S1-220104](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220104.zip) | Huawei | ***Clean-up of the references for quality improvement*** | CR | [**22.011**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=566) | 0330 |  | D | 18.1.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**TEI18**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920042) |
| [S1-220105](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220105.zip) | OPPO | ***Clarification of KPI in TS22.261 clause 7.10 for AMMT use case*** | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0633 |  | B | 18.5.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**AMMT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920030) |
| [S1-220106](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220106.zip) | Reliance Jio, Radisys. | ***New SID on 5G Enabled Open-SON*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220107](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220107.zip) | OPPO | ***Clarification of 5GC assistance for FL member selection*** | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0634 |  | B | 18.5.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**AMMT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920030) |
| [S1-220108](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220108.zip) | OPPO | ***Discussion on Sensing Scenario and Use Case*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220109](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220109.zip) | Qualcomm | ***Clarification of SoR requirements*** | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0635 |  | F | 17.9.0 | [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192) | [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047) |
| [S1-220110](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220110.zip) | Qualcomm | ***Clarification of SoR requirements*** | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0636 |  | A | 18.5.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047) |
| [S1-220111](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220111.zip) | Qualcomm, Lenovo, CableLabs, Xiaomi, Comcast Corporation, | ***New SID on Upper layer traffic aggregation and steering, over dual*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220112](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220112.zip) | Qualcomm Incorporated | ***ULTRAS - motivations*** | other |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220113](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220113.zip) | Qualcomm | ***Proposal for input to ITU-R on IMT-Industries*** | discussion |  |  |  |  |  |  |  |
| [S1-220114](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220114.zip) | NTT DOCOMO INC. | ***Addition of requirement to utilize a widely-used mechanism for authorization at northbound API*** | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0637 |  | F | 18.5.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**SNA**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=890024) |
| [S1-220115](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220115.zip) | China Telecom, CATT | ***Discussion on Enhancing 5G System Integrating with Satellite for Rel-19*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220116](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220116.zip) | China Telecom, CATT | ***New SID on enhancing 5G system integrating with satellite*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220117](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220117.zip) | China Telecom, CATT | ***Skeleton of Study on enhancing 5G system integrating with satellite*** | discussion |  |  |  |  |  |  |  |
| [S1-220118](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220118.zip) | OPPO | ***New SID: Study on Energy Harvesting enabled Communication Services in*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220119](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220119.zip) | OPPO | ***Motivation on support Energy Harvesting enabled Communication services in 5GS*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220120](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220120.zip) | OPPO | ***TR skeleton for New SID on Study on Energy Harvesting enabled Communication Services (EHECS)*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220121](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220121.zip) | Huawei | ***New use case: Sensing for Smart Transportation*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220122](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220122.zip) | Lenovo | ***New SID on supporting enhanced services configuration in a hosting network*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220123](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220123.zip) | Lenovo | ***Motivation for study on supporting enhanced services configuration in a hosting network*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220124](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220124.zip) | Lenovo | ***TR skeleton for study on supporting enhanced services configuration in a hosting network*** | discussion |  |  |  |  |  |  |  |
| [S1-220125](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220125.zip) | BDBOS, FirstNet, MINISTERE DE L'INTERIEUR, Netherlands Police | ***Clarification on use of MCPTT Late call entry KPIs*** | CR | [**22.179**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=623) | 0075 |  | F | 17.0.0 | [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192) | [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047) |
| [S1-220126](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220126.zip) | Thales, Novamint | ***Enhancing 5G system to support additional satellite capabilities*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220127](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220127.zip) | Alibaba | ***New SID: Study on enhancement of 5GC based on Cloud Native*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220128](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220128.zip) | Apple | ***LS to BBF, 3GPP SA2 on MINT and Higher priority PLMN Selection*** | discussion |  |  |  |  |  |  |  |
| [S1-220129](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220129.zip) | Apple | ***LS to CT1 on Reply LS on MINT and Higher priority PLMN Selection*** | LS out |  |  |  |  |  |  |  |
| [S1-220130](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220130.zip) | Alibaba Group | ***Discussion on enhancement of 5GC based on Cloud Native*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220131](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220131.zip) | THALES | ***Motivation for a SID on enhancing 5G system to support additional satellite capabilities for Rel- 19*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220132](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220132.zip) | Huawei, Huawei Device | ***Sensing used in home intelligence*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220133**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220133.zip) | Xiaomi | ***Integrated Sensing and Communication*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220134**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220134.zip) | Xiaomi | ***FS\_ISC Skeleton*** | other |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220135**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220135.zip) | Alibaba Group | ***Motivation of supporting Passive IoT*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220136**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220136.zip) | Huawei | ***Editorial corrections to TS 22.125 on UAV*** | CR | [**22.125**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3545) | 0043 |  | D | 17.5.0 | [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192) | [**ID\_UAS**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=810049) |
| [S1-220137](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220137.zip) | Xiaomi Technology | ***New SID on Mobile Relay Service*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220138**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220138.zip) | Xiaomi | ***New SID on Mobile Relay Service*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220139**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220139.zip) | Xiaomi Technology | ***DP on Mobile Relay Service*** | discussion |  |  |  |  |  |  |  |
| [**S1-220140**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220140.zip) | Huawei Technologies France | ***Discussion Paper: 5G-Advanced Harmonized Sensing and Communication Service*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220141**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220141.zip) | China Mobile | ***New SID on Additional capabilities of mobile networks for drone*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220142**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220142.zip) | China Mobile Com. Corporation | ***Motivation of Additional capabilities of mobile networks for drone operations and management*** | discussion |  |  |  |  |  |  |  |
| [**S1-220143**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220143.zip) | China Mobile Com. Corporation | ***FS\_DOM Skeleton*** | other |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220144**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220144.zip) | China Mobile,Xiaomi,Qualcomm | ***New SID on Integrated Sensing and Communication*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220145**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220145.zip) | Beijing Xiaomi Software Tech | ***Discussion for Study on 5GS supporting for Mobile User Service (FS\_5GMUS)*** | discussion |  |  |  |  |  |  |  |
| [**S1-220146**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220146.zip) | China Mobile Com. Corporation | ***Discussions on Sensing SID proposals*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220147**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220147.zip) | China Mobile Com. Corporation | ***FS\_ICS Skeleton*** | other |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220148**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220148.zip) | Xiaomi | ***New SID on 5GS supporting Mobile User Service*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220149**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220149.zip) | LG Electronics, LG Uplus, OPPO, KRRI, China Unicom, Kyonggi University, | ***Feasibility Study on 5G System Support for a Network of Service Robots with*** | SID new |  |  |  |  |  |  |  |
| [**S1-220150**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220150.zip) | LG Electronics Inc. | ***SOBOT - TR Skeleton*** | other |  |  |  |  |  |  |  |
| [**S1-220151**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220151.zip) | LG Electronics Inc. | ***SOBOT - Presentation*** | discussion |  |  |  |  |  |  |  |
| [S1-220152](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220152.zip) | LG Electronics Inc. | ***SOBOT - Use Case example*** | discussion |  |  |  |  |  |  |  |
| [**S1-220153**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220153.zip) | THALES, NOVAMINT | ***TR skeleton for Study on enhancing 5G system to support additional satellite capabilities*** | other |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220154**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220154.zip) | Huawei, Hisilicon, BMW Brilliance, China Mobile, KPN? | ***Passive IoT in intralogistics for automobile manufacturing*** | discussion |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220155**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220155.zip) | Hansung University, LGUplus, KT, ETRI | ***Pseudo-CR on suggesting definitions of RAILSS*** | pCR | [**22.890**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3699) |  |  |  | 0.6.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**FS\_RAILSS**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850044) |
| [**S1-220156**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220156.zip) | Hansung University, LGUplus, KT, ETRI | ***Pseudo-CR on suggesting contents for overview of TR22.890*** | pCR | [**22.890**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3699) |  |  |  | 0.6.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**FS\_RAILSS**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850044) |
| [**S1-220157**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220157.zip) | KPN, Huawei, FutureWei, Novamint, CATT, Spreadstrum | ***New SID on Passive Internet of Things for 5G Advanced*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220158**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220158.zip) | KPN | ***Skeleton for Passive IoT TR*** | other |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220159**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220159.zip) | KPN | ***Pseudo-CR on Scope for Passive IoT TR*** | other |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [**S1-220160**](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220160.zip) | TNO, one2many | ***New WID on Device Based Geofencing for EU-ALERT*** | WID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220161](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220161.zip) | Hansung University | ***RAILSS activity planning*** | discussion |  |  |  |  |  |  |  |
| [S1-220162](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220162.zip) | [Qualcomm / SA1] | ***LS to CT1 (cc SA3) on [DRAFT] Reply LS on User Controlled PLMN Selector with Access*** | LS out |  |  |  |  |  |  |  |
| [S1-220163](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220163.zip) | Qualcomm | ***Clarification of SoR requirements*** | CR | **22.011** | 0331 |  | F | 17.5.0 | **Rel-17** | **TEI17** |
| [S1-220164](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220164.zip) | Qualcomm | ***Clarification of SoR requirements*** | CR | **22.011** | 0332 |  | A | 18.1.0 | **Rel-18** | **TEI17** |
| [S1-220165](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220165.zip) | Samsung | ***LS to SA6 on [Draft] Reply LS on ad hoc group communication*** | LS out |  |  |  |  |  |  |  |
| [S1-220166](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220166.zip) | Saankhya Labs, IIT Bombay | ***Usage of Non-3GPP NTN for Multicast Broadcast Services in 5GS*** | discussion |  |  |  |  |  |  |  |
| [S1-220167](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220167.zip) | Saankhya Labs, IIT Bombay, Ligado Networks, One Media 3.0, Fraunhofer IIS, CEWiT, Tejas Networks, IIT Kanpur, IIT Madras, IIT Hyderabad, IIT Kharagpur | ***Usage of Non-3GPP NTN (Satellite access network) for Multicast Broadcast Services in 5GS*** | CR | **22.261** | 0638 |  | B | 18.5.0 | **Rel-19** | **5GSAT** |
| [S1-220168](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220168.zip) | Saankhya Labs, IIT Bombay | ***Usage of Non-3GPP Digital Terrestrial Broadcast Networks for Multicast Broadcast Services in 5GS*** | discussion |  |  |  |  |  |  |  |
| [S1-220169](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220169.zip) | Saankhya Labs, IIT Bombay, Hewlett-Packard Enterprise, Ligado Networks, One Media 3.0, Fraunhofer IIS, CEWiT, Tejas Networks, IIT Kanpur, IIT Madras, IIT Hyderabad, IIT Kharagpur | ***Usage of Non-3GPP DTT Broadcast Networks for Multicast/Broadcast Services in 5GS*** | CR | **22.261** | 0639 |  | B | 18.5.0 | **Rel-19** | **5MBS** |
| [S1-220170](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220170.zip) | MCC | ***Guidelines on WID names and acronyms*** | Presentation |  |  |  |  |  |  |  |
| [S1-220171](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220171.zip) | MCC | ***Proposed changes on names and acronyms for the new WIDs*** | other |  |  |  |  |  |  |  |
| [S1-220172](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220172.zip) | Deutsche Telekom | ***LS to BBF, 3GPP SA2 on LS on Alignment concerning 5G RG requirements and its remote*** | LS out |  |  |  |  |  |  |  |
| [S1-220173](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220173.zip) | ISO/IEC JTC 1/SC 29/WG 2 N00172 | ***LS on Haptics*** | LS in |  |  |  |  |  |  |  |
| [S1-220174](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220174.zip) | Chair | ***Opening session remarks for SA1#97e*** | Other |  |  |  |  |  |  |  |
| [S1-220175](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220175.zip) | China Mobile | ***LS to ISO/IEC JTC 1/SC 29/WG 2 N00172 on Draft LS Response on Haptics*** | LS out |  |  |  |  |  |  |  |
| [S1-220176](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220176.zip) | Samsung | ***Clarifications on PLMN search for FPLMN Registered UEs*** | CR | **22.011** | 0333 |  | F | 17.5.0 | **Rel-17** | **MINT** |
| [S1-220177](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220177.zip) | Samsung | ***Clarifications on PLMN search for FPLMN Registered UEs*** | CR | **22.011** | 0334 |  | A | 18.1.0 | **Rel-18** | **MINT** |
| [S1-220178](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220178.zip) | KPN | ***New SID on satellite access Phase 3*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220179](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220179.zip) | Chair | ***Presentation on progress of Sensing*** | discussion |  |  |  |  |  | **Rel-19** |  |
| [S1-220180](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220180.zip) | Hansung University, LGU, KT, SK Telecom, ETRI, LGE, UIC | ***Revised WID: Study on Supporting of Railway Smart Station*** | WID revised |  |  |  |  |  |  |  |
| [S1-220181](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220181.zip) | Qualcomm Incorporated | ***LS to SA on LS on Text Proposal for ITU-R draft Report ITU-R M.[IMT.INDUSTRY]*** | LS out |  |  |  |  |  |  |  |
| [S1-220182](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220182.zip) | Qualcomm Incorporated | ***Final LS to SA Proposal for input to ITU-R on IMT-Industries*** | LS out |  |  |  |  |  |  |  |
| [S1-220183](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220183.zip) | OPPO | ***Study on AI/ML Model Transfer\_Phase 2*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220184](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220184.zip) | OPPO | ***Study on AI/ML Model Transfer\_Phase 2*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220185](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220185.zip) | SA1 | ***LS to SA3, SA6 (cc SA) on reply to SA6 about new SID on Application Enablement for Data Integrity Verification Service in IOT*** | LS out |  |  |  |  |  |  |  |
| [S1-220186](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220186.zip) | SA1 | ***Reply LS to SA6 on Ad hoc group communication*** | LS out |  |  |  |  |  |  |  |
| [S1-220187](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220187.zip) | SA1 | ***LS to CT1 (cc SA3, SA) on Reply LS on User Controlled PLMN Selector with Access Technology in Control plane solution for steering of roaming in 5GS*** | LS out |  |  |  |  |  |  |  |
| [S1-220188](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220188.zip) | SA1 | ***LS to SA on LS on Alignment concerning 5G RG requirements and its remote management*** | LS out |  |  |  |  |  |  |  |
| [S1-220189](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220189.zip) | Qualcomm | ***Proposal for input to ITU-R on IMT-Industries*** | discussion |  |  |  |  |  |  |  |
| [S1-220190](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220190.zip) | SA1 | ***LS to ISO/IEC JTC 1/SC 29/WG 2 N00172 (cc SA4) on LS Response on Haptics*** | LS out |  |  |  |  |  |  |  |
| [S1-220191](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220191.zip) | China Mobile, Xiaomi, Qualcomm, Sony, LGE, vivo, Huawei, Sharp, Futurewei, Nokia, Vodafone, | ***New SID on Integrated Sensing and Communication*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220192](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220192.zip) | OPPO | ***New SID: Study on Ambient power-enabled Internet of Things*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220193](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220193.zip) | Thales | ***New SID on satellite access Phase 3*** | SID new |  |  |  |  |  | [**Rel-19**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=194) |  |
| [S1-220194](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220194.zip) | China Mobile, China Telecom, vivo | ***New SID on supporting computing aware network*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220195](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220195.zip) | Samsung, LG Uplus, Tencent, KDDI, Orange, Dish Network, KT Corp, FirstNet, Charter | ***New WID on Feasibility Study on Localized Mobile Metaverse Services*** | SID new |  |  |  |  |  |  |  |
| [S1-220196](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220196.zip) | China Unicom, China Telecom, Charter Communications, vivo, | ***Study on Network Sharing Aspects*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220197](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220197.zip) | UIC, KT, LG Uplus, ETRI, Kyunggi University, Hansung University, | ***Study on FRMCS Phase 3*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220198](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220198.zip) | ZTE Corporation, CEPRI, China Telecom, China Unicom | ***New study on Measurement Data Collection and Integrity*** | SID new |  |  |  |  |  |  |  |
| [S1-220199](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220199.zip) | China Telecom, ，ZTE, CEPRI | ***New SID on Multi-hop Multi-path Relay Network for Extensiveded CoverageEnhancement*** | SID new |  |  |  |  |  |  |  |
| [S1-220200](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220200.zip) | Xiaomi | ***New SID on enhanced mobile relay*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220201](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220201.zip) | vivo | ***New SID on Personal IoT Networks phase 2*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220202](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220202.zip) | China Telecom | ***New SID on Minimization of Service Interruption Phase 2*** | SID new |  |  |  |  |  |  |  |
| [S1-220203](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220203.zip) | China Telecom | ***New study on Live Migratable Services in the 5G System*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220204](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220204.zip) | China Mobile | ***New SID on service enhancement of Energy Efficiency*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220205](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220205.zip) | Reliance Jio | ***New SID on 5G Enabled Open-SON*** | SID new |  |  |  |  |  |  |  |
| [S1-220206](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220206.zip) | Qualcomm, Lenovo, CableLabs, Xiaomi, Comcast Corporation, | ***New SID on Upper layer traffic steering, switching and split over*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220207](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220207.zip) | Alibaba | ***New SID: Study on elastic, scalable and flexiblecloud based 5G core*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220208](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220208.zip) | China Mobile | ***New SID on UAV Phase 3*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220209](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220209.zip) | Xiaomi | ***New SID on 5GS supporting Mobile User Service*** | SID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220210](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220210.zip) | LG Electronics, LG Uplus, OPPO, KRRI, China Unicom, Kyonggi University, | ***Feasibility Study on 5G System Support for a Network of Network of Service*** | SID new |  |  |  |  |  |  |  |
| [S1-220211](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220211.zip) | Saankhya Labs and IIT Bombay | ***New WID on Usage of Non-3GPP NTN for Multicast Broadcast Services in 5GS*** | WID new |  |  |  |  |  | **Rel-19** |  |
| [S1-220212](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220212.zip) | Saankhya Labs, IIT Bombay, Ligado Networks, One Media 3.0, Fraunhofer IIS, CEWiT, Tejas Networks, IIT Kanpur, IIT Madras, IIT Hyderabad, IIT Kharagpur, Reliance Jio, Lockheed Martin Corporation | ***Usage of Non-3GPP NTN (Satellite access network) for Multicast Broadcast Services in 5GS*** | CR | **22.261** | 0638 | 1 | B | 18.5.0 | **Rel-19** | **Sat4MBS** |
| [S1-220213](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220213.zip) | Saankhya Labs, IIT Bombay | ***Usage of Non-3GPP NTN for Multicast Broadcast Services in 5GS*** | discussion |  |  |  |  |  |  |  |
| [S1-220214](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220214.zip) | China Mobile | ***22.262v17.0.0 Non-inclusive language replacement*** | CR | **22.262** | 0002 | 1 | D | 17.0.0 | **Rel-17** | **TEI17** |
| [S1-220215](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220215.zip) | Huawei | ***Editorial corrections to TS 22.125 on UAV*** | CR | **22.125** | 0043 | 1 | D | 17.5.0 | **Rel-17** | **ID\_UAS** |
| [S1-220216](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220216.zip) | Huawei | ***Editorial corrections for quality improvement*** | CR | **22.847** | 0014 | 1 | D | 18.1.0 | **Rel-18** | **FS\_TACMM** |
| [S1-220217](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220217.zip) | Huawei | ***Update the use of may and can for quality improvement*** | CR | **22.261** | 0632 | 1 | F | 18.5.0 | **Rel-18** | **TEI18** |
| [S1-220218](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220218.zip) | UIC | ***Adding MCX Service Ad hoc Group Communication as alternative capability to support Railway Emergency Communication*** | CR | **22.989** | 0012 | 1 | B | 18.3.0 | **Rel-18** | **FS\_eFRMCS** |
| [S1-220219](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220219.zip) | Ericsson | ***22.261v18.5.0 Clarification of terminology for localized services*** | CR | **22.261** | 0630 | 1 | F | 18.5.0 | **Rel-18** | **PALS** |
| [S1-220220](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220220.zip) | Qualcomm | ***Correction to CPN Requirements*** | CR | **22.261** | 0631 | 1 | F | 18.5.0 | **Rel-18** | **PIRATES** |
| [S1-220221](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220221.zip) | OPPO, Kyonggi University | ***Clarification of KPI in TS22.261 clause 7.10 for AMMT use case*** | CR | **22.261** | 0633 | 1 | F | 18.5.0 | **Rel-18** | **AMMT** |
| [S1-220222](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220222.zip) | OPPO | ***Clarification of 5GC assistance for FL member selection*** | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0634 | 1 | F | 18.5.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**AMMT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920030) |
| [S1-220223](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220223.zip) | BDBOS, FirstNet, Netherlands Police, MINISTERE DE L'INTERIEUR | ***Clarification on use of MCPTT Late call entry KPIs*** | CR | **22.179** | 0075 | 1 | F | 17.0.0 | **Rel-17** | **TEI17, MCPTT** |

## Annex B: List of agreed change requests (sorted by TS then CR#)

Agreed CRs (sorted by Spec, CR#)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tdoc # | Source | Title | Type | Spec | CR# | r | cat | Versionin | Rel | WI |
| [S1-220104](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220104.zip) | Huawei | Clean-up of the references for quality improvement | CR | [**22.011**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=566) | 0330 |  | D | 18.1.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**TEI18**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920042) |
| [S1-220215](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220215.zip) | Huawei | Editorial corrections to TS 22.125 on UAV | CR | **22.125** | 0043 | 1 | D | 17.5.0 | **Rel-17** | **ID\_UAS** |
| [S1-220223](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220223.zip) | BDBOS, FirstNet, Netherlands Police, MINISTERE DE L'INTERIEUR | Clarification on use of MCPTT Late call entry KPIs | CR | **22.179** | 0075 | 1 | F | 17.0.0 | **Rel-17** | **TEI17, MCPTT** |
| [S1-220219](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220219.zip) | Ericsson | 22.261v18.5.0 Clarification of terminology for localized services | CR | **22.261** | 0630 | 1 | F | 18.5.0 | **Rel-18** | **PALS** |
| [S1-220220](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220220.zip) | Qualcomm | Correction to CPN Requirements | CR | **22.261** | 0631 | 1 | F | 18.5.0 | **Rel-18** | **PIRATES** |
| [S1-220217](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220217.zip) | Huawei | Update the use of may and can for quality improvement | CR | **22.261** | 0632 | 1 | F | 18.5.0 | **Rel-18** | **TEI18** |
| [S1-220221](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220221.zip) | OPPO, Kyonggi University | Clarification of KPI in TS22.261 clause 7.10 for AMMT use case | CR | **22.261** | 0633 | 1 | F | 18.5.0 | **Rel-18** | **AMMT** |
| [S1-220222](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220222.zip) | OPPO | Clarification of 5GC assistance for FL member selection | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0634 | 1 | F | 18.5.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**AMMT**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920030) |
| [S1-220109](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220109.zip) | Qualcomm | Clarification of SoR requirements | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0635 |  | F | 17.9.0 | [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192) | [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047) |
| [S1-220110](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220110.zip) | Qualcomm | Clarification of SoR requirements | CR | [**22.261**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3107) | 0636 |  | A | 18.5.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047) |
| [S1-220214](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220214.zip) | China Mobile | 22.262v17.0.0 Non-inclusive language replacement | CR | **22.262** | 0002 | 1 | D | 17.0.0 | **Rel-17** | **TEI17** |
| [S1-220015](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220015.zip) | UIC, Nokia, Kontron Transportation France, KRRI, FirstNet, Hansung University, Samsung | Enhanced MCX Service Ad hoc Group Communication to support Railway needs | CR | [**22.280**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3017) | 0149 |  | C | 18.0.0 | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**TEI18**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900026) |
| [S1-220216](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220216.zip) | Huawei | Editorial corrections for quality improvement | CR | **22.847** | 0014 | 1 | D | 18.1.0 | **Rel-18** | **FS\_TACMM** |
| [S1-220218](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220218.zip) | UIC | Adding MCX Service Ad hoc Group Communication as alternative capability to support Railway Emergency Communication | CR | **22.989** | 0012 | 1 | B | 18.3.0 | **Rel-18** | **FS\_eFRMCS** |

## Annex B': List of agreed pCRs

None at this meeting

## Annex C: Lists of liaisons

Approved outgoing LSs

|  |  |  |
| --- | --- | --- |
| Tdoc # | Source | Title |
| [S1-220185](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220185.zip) | SA1 | LS to SA3, SA6 (cc SA) on reply to SA6 about new SID on Application Enablement for Data Integrity Verification Service in IOT |
| [S1-220186](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220186.zip) | SA1 | Reply LS to SA6 on Ad hoc group communication |
| [S1-220187](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220187.zip) | SA1 | LS to CT1 (cc SA3, SA) on Reply LS on User Controlled PLMN Selector with Access Technology in Control plane solution for steering of roaming in 5GS |
| [S1-220188](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220188.zip) | SA1 | LS to SA on LS on Alignment concerning 5G RG requirements and its remote management |
| [S1-220190](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220190.zip) | SA1 | LS to ISO/IEC JTC 1/SC 29/WG 2 N00172 (cc SA4) on LS Response on Haptics |

## Annex D: List of agreed/approved new and revised Work Items

Agreed new SIDs

|  |  |  |
| --- | --- | --- |
| Tdoc # | Source | Title |
| [S1-220191](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220191.zip) | China Mobile, Xiaomi, Qualcomm, Sony, LGE, vivo, Huawei, Sharp, Futurewei, Nokia, Vodafone, | New SID on Integrated Sensing and Communication |
| [S1-220192](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220192.zip) | OPPO | New SID: Study on Ambient power-enabled Internet of Things |
| [S1-220195](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220195.zip) | Samsung, LG Uplus, Tencent, KDDI, Orange, Dish Network, KT Corp, FirstNet, Charter | New WID on Feasibility Study on Localized Mobile Metaverse Services |
| [S1-220196](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220196.zip) | China Unicom, China Telecom, Charter Communications, vivo, | Study on Network Sharing Aspects |
| [S1-220197](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220197.zip) | UIC, KT, LG Uplus, ETRI, Kyunggi University, Hansung University, | Study on FRMCS Phase 3 |
| [S1-220184](https://ftp.3gpp.org/tsg_sa/WG1_Serv/TSGS1_97e_EM_Feb2022/Docs/S1-220184.zip) | OPPO | Study on AI/ML Model Transfer\_Phase 2 |

## Annex E: List of agreed/approved new versions of TR/TS

None at this meeting

## Annex F: Registered Participants list

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TITLE | Family Name | Given Name | Organization Represented | Organization Represented Category Code |
| Mr. | Chandratre | Prasad | Lockheed Martin | ATIS |
| Dr. | Ahn | Woojin | KRRI | TTA |
| Mr. | Ai | Ming | CATT | ETSI |
| Mr. | Aleksiev | Vasil | Telekom Deutschland GmbH | ETSI |
| Ing. | Almodovar Chico | Jose Luis | KPN N.V. | ETSI |
| Mr. | Askerup | Anders | Hewlett-Packard Enterprise | ETSI |
| Mr. | audebert | vincent | EDF Recherche et Développement | ETSI |
| Dr. | Awoniyi-Oteri | Olufunmilola | Qualcomm Austria RFFE GmbH | ETSI |
| Mr. | Bahr | Michael | Siemens AG | ETSI |
| Dr. | Baskaran | Sheeba Backia Mary | Motorola Mobility Germany GmbH | ETSI |
| Mr. | Berisot | Thierry | NOVAMINT | ETSI |
| Mr. | Bischinger | Kurt | Deutsche Telekom AG | ETSI |
| Mr. | Bleckert | Peter | Ericsson LM | ETSI |
| Mr. | Buckley | Adrian | MITRE Corporation | ETSI |
| Mr. | BYUN | ILMU | KRRI | TTA |
| Ms. | Camacho | Cristina | Vodafone GmbH | ETSI |
| Dr. | Cao | Jeffrey (Jianfei) | Guangdong OPPO Mobile Telecom. | CCSA |
| Dr. | Ce | ZHENG | Sony Group Corporation | ARIB |
| Dr. | Cetinkaya | Egemen | Verizon Denmark | ETSI |
| Mr. | Champel | Mary-Luc | Beijing Xiaomi Electronics | CCSA |
| Mr. | Chang | Jaehyun | LG Uplus | TTA |
| Mr. | Chen | Dong | Xiaomi Communications | CCSA |
| Mr. | Chen | Jiajun | ZTE Wistron Telecom AB | ETSI |
| Mr. | Chen | Jingran | OnePlus | CCSA |
| Dr. | Chen | Lin | ZTE Corporation | CCSA |
| Dr. | Chen | Sun | Sony Group Corporation | ARIB |
| Ms. | Chen | Yinglin | China Telecom Corporation Ltd. | CCSA |
| Mr. | CHIN | ChenHo | OPPO | ETSI |
| Dr. | Chitrapu | Prabhakar | Lockheed Martin | ATIS |
| Dr. | Cho | Seung-Mo | SK Telecom | TTA |
| Mr. | Choi | Hyung-Nam | Motorola Mobility UK Ltd. | ETSI |
| Prof. | Choi | Sang Won | Kyonggi University | TTA |
| Miss | chong | vivian | VIVO TECH GmbH | ETSI |
| Mr. | Chou | Joey | Intel Korea, Ltd. | TTA |
| Mr. | Chuberre | Nicolas | THALES | ETSI |
| Dr. | Cogalan | Tezcan | InterDigital, Europe, Ltd. | ETSI |
| Mr. | Cong | Shi | Dongguan OPPO Precision Elec. | CCSA |
| Ms. | Covell | Betsy | Nokia Solutions & Networks (I) | TSDSI |
| Mr. | Cui | Shengjiang | Beijing OPPO Com. corp., ltd | CCSA |
| Mr. | Cui | Tao | Sony Corporation | ARIB |
| Mr. | Dawkins | Spencer | Tencent | CCSA |
| Mr. | Dees | Walter | Philips International B.V. | ETSI |
| Mrs. | Demers | Stephanie | Peraton Labs | ATIS |
| Mr. | DHARMADHIKARI | OMKAR | CableLabs | ETSI |
| Miss | Eitoku | Haruka | NTT corporation | ETSI |
| Mr. | Elamanov | Sherzod | SyncTechno, Inc. | TTA |
| Mr. | Ferrus | Ramon | Sateliot | ETSI |
| Mr. | Fine | Jean-Yves | THALES | ETSI |
| Mr. | Gach | Guillaume | Union Inter. Chemins de Fer | ETSI |
| Mr. | Ganesan | Karthikeyan | Motorola Mobility España SA | ETSI |
| Mrs. | Gao | Yin | ZTE Corporation | ETSI |
| Mr. | Garcia | Jorge | HISPASAT SA | ETSI |
| Dr. | Garcia-Morchon | Oscar | Philips International B.V. | ETSI |
| Mr. | Gray | Jeffrey | OTD | ETSI |
| Mr. | Guirguis | Ihab | FirstNet | ATIS |
| Mr. | Guo | Yi | Intel Belgium SA/NV | ETSI |
| Mr. | Guttman | Erik | Samsung Electronics GmbH | ETSI |
| Mr. | Hall | Edward | Huawei Technologies Sweden AB | ETSI |
| Prof. | Han | Andrew Min-gyu | Hansung University | TTA |
| Dr. | Han | Jaemin | Intel Russia A/O | ETSI |
| Mr. | Haojin | Li | Sony Group Corporation | ARIB |
| Mr. | He | Chuanfeng | Chengdu OPPO Mobile Com. corp. | CCSA |
| Mr. | Hirisave | Pradeep | Reliance Jio | TSDSI |
| Mr. | Honma | Keita | Kyocera Corporation | ARIB |
| Ms. | Horiba | Katsuhiro | SoftBank Corp. | ARIB |
| Mr. | Howell | Andrew | NCSC | ETSI |
| Mr. | Hu | Tuo | Quanray | CCSA |
| Miss | Hu | Yue | China Mobile Com. Corporation | CCSA |
| Miss | Hu | Yushuang | China Mobile Com. Corporation | CCSA |
| Mr. | Huang | Yingpei | Shenzhen YZF Network Technolog | CCSA |
| Dr. | Huang-fu | JJ | MediaTek Inc. | ETSI |
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| Dr. | Jiang | Tianji | China Mobile Com. Corporation | CCSA |
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| Miss | JIN | Ning | China Telecom Corporation Ltd. | CCSA |
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| Ms. | Kim | Eunah | ETRI | TTA |
| Dr. | Kim | Hyunsook | LG Electronics Inc. | TTA |
| Dr. | Kim | Laeyoung | LG Electronics France | ETSI |
| Dr. | Kim | Youn-Kwan | SyncTechno Inc. | TTA |
| Mr. | Kito | Takatsugu | KDDI Corporation | TTC |
| Mr. | Kolekar | Abhijeet | Intel | ATIS |
| Ms. | Koo | Hyounhee | SyncTechno, Inc. | TTA |
| Dr. | Koulakiotis | Dimitris | Sony Europe B.V. | ETSI |
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| Dr. | Kueh | Victor | Huawei Technologies Japan K.K. | TTC |
| Mr. | Lagrange | Mathieu | B-Com | ETSI |
| Mr. | Lau | Stephen | Kepler | ETSI |
| Mr. | Lazara | Dominic | Motorola Solutions UK Ltd. | ETSI |
| Mr. | Lee | Jicheol | Samsung Electronics Co., Ltd | TTA |
| Dr. | Lee | Ki-Dong | LG Electronics Inc. | TTA |
| Miss | Lee | Seung Eun | KT Corp. | TTA |
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| Mr. | Li | Lantao | Sony Corporation | ARIB |
| Dr. | Li | Ruyue Yu-Ngok | ShenZhen Zhongxing Shitong | CCSA |
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| Miss | li | yuan | China Mobile Com. Corporation | CCSA |
| Dr. | Liang | Haoran | Xiaomi Communications | CCSA |
| Dr. | Liao | Ellen C. | Intel Sweden AB | ETSI |
| Mr. | Libunao | Gerardo | Verizon UK Ltd | ETSI |
| Mr. | lin | hao | OPPO | ETSI |
| Dr. | Lin | Kevin | Chengdu OPPO Mobile Com. corp. | CCSA |
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| Mr. | LIU | Jianning(Carry) | Beijing Xiaomi Software Tech | CCSA |
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| Dr. | Liu | Mengmeng | Zhejiang Lab | CCSA |
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| Mr. | Lottin | Philippe | Orange | ETSI |
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| Mr. | Lu | Jinghao | CBN | CCSA |
| Mr. | Luetzenkirchen | Thomas | Intel Deutschland GmbH | ETSI |
| Mr. | Ly | Quang | Convida Wireless | ETSI |
| Mr. | Lyu | Huazhang | vivo Mobile Communication (S) | CCSA |
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| Mr. | Masal | Abhijeet | CEWiT | TSDSI |
| Mr. | Matsushima | Satoru | SoftBank Corp. | ARIB |
| Mr. | Mayer | Georg | HUAWEI TECHNOLOGIES Co. Ltd. | ETSI |
| Mr. | Mellies | Renaud | MINISTERE DE L'INTERIEUR | ETSI |
| Mr. | Merkel | Jürgen | Nokia Korea | TTA |
| Mr. | Methenni | Achref | InterDigital, Inc. | ETSI |
| Mr. | MICHEL | Cyril | THALES | ETSI |
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| Mr. | Miyamoto | Yoshihiro | NEC Corporation | TTC |
| Mr. | Monrad | Atle | InterDigital, Europe, Ltd. | ETSI |
| Dr. | Mustapha | Mona | Apple (UK) Limited | ETSI |
| Mr. | Mysore Annaiah | Mahesh Nayaka | Reliance Jio | TSDSI |
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| Mr. | Nakano | Yusuke | KDDI Corporation | ARIB |
| Mr. | Nangia | Vijay | Motorola Mobility UK Ltd. | ETSI |
| Mr. | Niang | Mamadou M. | Verizon Spain | ETSI |
| Mr. | Norp | Toon | TNO | ETSI |
| Mr. | Norton | Mark | U.S. Department of Defense | ATIS |
| Mr. | Oh | Sangchul | ETRI | TTA |
| Mr. | Olbrich | Emil | Anterix | ATIS |
| Mr. | Olesen | Robert | Lockheed Martin | ATIS |
| Mr. | Olvera | Ulises | InterDigital, Europe, Ltd. | ETSI |
| Dr. | Palat | Sudeep | Intel Corporation (UK) Ltd | ETSI |
| Prof. | Pan | Jen-Yi | ITRI | ETSI |
| Mr. | Park | Kenneth | SHARP Corporation | ARIB |
| Dr. | Park | Sungsoo | KRRI | TTA |
| Mr. | Patel | Ashish Singh | IIT Delhi | TSDSI |
| Dr. | Pateromichelakis | Emmanouil | Lenovo Future Communications | CCSA |
| Mr. | Patry | Frank | Omnispace | ATIS |
| Mr. | Phan | Ly-Thanh | THALES | ETSI |
| Mr. | Pica | Francesco | Qualcomm Incorporated | ATIS |
| Dr. | Pinheiro | Ana Lucia | Comcast | ATIS |
| Dr. | Pittampalli | Eshwar | FirstNet | ATIS |
| Mr. | Pozo | Sergio | Vodafone Romania S.A. | ETSI |
| Mr. | Prochaska | Dean | FirstNet | ATIS |
| Miss | Qi | Wen | China Telecommunications | ETSI |
| Mr. | Qin | Pengtai | China Mobile Com. Corporation | CCSA |
| Mr. | Ramanan | Sivasubramaniam | HOME OFFICE | ETSI |
| Ms. | Rashmi Kamran | Rashmi Kamran | IIT Bombay | TSDSI |
| Dr. | Ray | Sankar | AT&T GNS Belgium SPRL | ETSI |
| Mr. | Robson | Julius | Eutelsat S.A. | ETSI |
| Ms. | Ryu | Jinsook | Dish Network | ATIS |
| Mr. | Saboorian | Tony | Futurewei | ETSI |
| Mr. | Saha | Anindya | Saankhya Labs | TSDSI |
| Mr. | Sällberg | Krister | Ericsson Limited | ETSI |
| Mr. | Sanders | Peter | one2many B.V. | ETSI |
| Dr. | Sarathchandra | Chathura | InterDigital, Europe, Ltd. | ETSI |
| Dr. | Savaglio | Frank | Telstra Corporation Limited | ETSI |
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| Mr. | Shan | Changhong | Intel China Ltd. | CCSA |
| Dr. | Shao | Xiao | TOYOTA MOTOR CORPORATION | TTC |
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| Mr. | Shen | Jia | Chengdu OPPO Mobile Com. corp. | CCSA |
| Ms. | Shen | Yang | Beijing Xiaomi Mobile Softwar | CCSA |
| Dr. | Shen | Zukang | HuaWei Technologies Co., Ltd | CCSA |
| Ms. | Shi | Xiaonan | China Mobile Com. Corporation | CCSA |
| Dr. | SHI | Zhihua | OPPO | ETSI |
| Mr. | Simha | Sesh | ONE Media 3.0 LLC | ATIS |
| Mr. | Simmons | Paul | Eutelsat S.A. | ETSI |
| Mr. | Singh | Ray | Peraton Labs | ATIS |
| Mr. | Smith | David K. | AT&T | ATIS |
| Mr. | Srinivasan | Suresh | Intel K.K. | ARIB |
| Mr. | srivastava | Vimal | Cisco Systems France | ETSI |
| Mr. | Stojanovski | Saso | Intel Finland Oy | ETSI |
| Mr. | Sultan | Alain | ETSI | ETSI |
| Dr. | Taghizadeh Motlagh | Seyedomid | Motorola Mobility Germany GmbH | ETSI |
| Mr. | Takada | Terufumi | DENSO CORPORATION | ARIB |
| Mr. | Takeshi | Tominaga | NTT DOCOMO INC. | TTC |
| Dr. | Tan | Sheu-Sheu | ViaSat Satellite Holdings Ltd | ETSI |
| Mr. | Teniou | Gilles | Tencent | CCSA |
| Mrs. | Thorpe-Taylor | Carol-lyn | CISA ECD | ATIS |
| Dr. | Tian | Wenqiang | Guangdong OPPO Mobile Telecom. | CCSA |
| Mr. | Tokel | Baris | ASELSAN | ETSI |
| Mr. | Toobe | Jens | BDBOS | ETSI |
| Mr. | Tossou | Bruno | Orange UK | ETSI |
| Miss | tunali | aysegul | ASELSAN | ETSI |
| Dr. | Vanderveen | Michaela | MITRE Corporation | ETSI |
| Mr. | Verweij | Kees | Netherlands Police | ETSI |
| Mr. | Vialen | Jukka | Airbus | ETSI |
| Ms. | Wang | Donna | Verizon Denmark | ETSI |
| Mr. | Wang | Heng | China Telecommunications | ETSI |
| Dr. | Wang | Hucheng | CATT | CCSA |
| Ms. | Wang | Hui | vivo Communication Technology | CCSA |
| Dr. | Wang | Shuo | Sony Group Corporation | ARIB |
| Mr. | Wang | Wen | vivo Mobile Com. (Chongqing) | CCSA |
| Miss | Wang | xinli | Xiaomi Technology | CCSA |
| Mr. | Wang | Yuan | Huawei Tech.(UK) Co.. Ltd | ETSI |
| Mr. | Ward | Bruce | NTIA | ATIS |
| Mr. | Watts | Simon | Avanti | ETSI |
| Mr. | Wei | Erling | Guangdong OPPO Mobile Telecom. | CCSA |
| Ms. | WEI | QUN | China Unicom | CCSA |
| Dr. | Weiss | Mario | BMWi | ETSI |
| Mr. | Woodward | Tim | Motorola Solutions Danmark A/S | ETSI |
| Dr. | Wu | Deh-Min Richard | Charter Communications, Inc | ATIS |
| Ms. | WU | Jinhua | Beijing Xiaomi Mobile Software | ETSI |
| Ms. | Wu | Shuxia | Honor | CCSA |
| Mr. | Wu | Xiaobo | vivo Mobile Communication Co., | CCSA |
| Miss | Wu | Zuomin | Orope Germany GmbH | ETSI |
| Mr. | XIA | XU | China Telecomunication Corp. | CCSA |
| Mrs. | Xiang | Amanda | Futurewei | ETSI |
| Miss | Xu | Hui | CICT | CCSA |
| Mrs. | Xu | Ling | ZTE Corporation | CCSA |
| Mr. | Xu | Weijie | Shenzhen YZF Network Technolog | CCSA |
| Mr. | Xu | Yang | Guangdong OPPO Mobile Telecom. | CCSA |
| Ms. | Xu | Yishan | HUAWEI TECHNOLOGIES Co. Ltd. | ETSI |
| Dr. | Xu | Zhikun | Spreadtrum Communications | CCSA |
| Ms. | Xue | Kaixin | CBN | CCSA |
| Miss | Yao | Chuting | Huawei Device Co., Ltd | CCSA |
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| Mrs. | Yeltekin | Yasemin | ASELSAN | ETSI |
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| Dr. | Yi | Yunjung | CableLabs | ETSI |
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| Mr. | Yu | Hang | vivo Mobile Communication (H) | CCSA |
| Dr. | Yu | Xiaobo | Alibaba (China) Group., Ltd. | CCSA |
| Dr. | Yu | Xinlei | Beijing OPPO Com. corp., ltd | CCSA |
| Mr. | Zeng | Qingjun | CBN | CCSA |
| Mr. | Zhang | Nan | Jetflow | CCSA |
| Mr. | ZHANG | Shichang | Chengdu OPPO Mobile Com. corp. | CCSA |
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| Miss | Zhang | Yi | Orope Germany GmbH | ETSI |
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| Dr. | Zhang | Zhuoyun | Tencent Cloud | CCSA |
| Dr. | Zhao | Guliang | INSPUR | CCSA |
| Mr. | Zhao | Zhenshan | Guangdong OPPO Mobile Telecom. | CCSA |
| Ms. | Zhou | Yingjun | ZTE Corporation | ETSI |
| Mr. | Zhu | Chunhui | Spreadtrum Communications | CCSA |
| Mrs. | Zhu | Fangyuan | HuaWei Technologies Co., Ltd | CCSA |
| Mrs. | Zhu | Wenruo | HuaWei Technologies Co., Ltd | CCSA |
| Mr. | Zuo | Zhisong | Shenzhen YZF Network Technolog | CCSA |