**3GPP TSG RAN Meeting #109 RP-25abcd**

**Beijing, China, September 15-18, 2025**

Status Report to TSG

**Agenda item:** 9.6.1.5

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| --- | --- |
| **WI / SI Name** | Enhancements of network energy savings for NR |
| included in this status report | Study Item: No | Core part: Yes | Performance part:Yes | Testing part:No |
| **Acronym** | Netw\_Energy\_NR\_enh |
| **Unique ID** | 1020095 |
| **TSG Tdoc of latest approved WI/SI description (if any)** | RP-251678 |
| **Target Completion Date****(indicate if changed)** | Study Item: n/a | Core part: 09/2025 | Performance part: 03/2026 | Testing part: n/a |
| **Overall Completion level** | Study Item: n/a | Core part: 100% | Performance Part: 15% | Testing part: n/a |

Note: Overall completion level percentage numbers should use one of the colors below:

* xx%: Normal progress, no RAN plenary action needed
* xx%: Progress behind schedule, may need RAN plenary intervention. If so, SR should clearly define requested action
* xx%: Progress critically behind, RAN plenary shall intervene. SR should define requested action

**Source:**

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| **Leading WG** | RAN1 |
| **Rapporteur (primary)** | **Name** | Ajit Nimbalker |
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1 Work plan related evaluation

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| **Do you want to modify the time budget for this WI/SI compared to what was endorsed at the last RAN meeting?** | No |

*If you answered No: Then please remove the Excel file from the zip file of this status report.*

*If you answered Yes: Then please fill out the attached Excel template to request a modification of the time budgets for your WI /SI. The Excel table has to be filled out for all affected RAN WGs and up to the target date of the WI/SI. The basis are the endorsed time budgets of the last RAN meeting. Please highlight all changes of the values.
 One time unit (TU) corresponds to ~ 2 hours in the meeting.
 If this status report covers a WI with Core and Performance part, then please have one line for each in the attached Excel table.
 Note: If no Excel table is attached, then this means no time budget change.*

**Additional explanations/motivations for the time budget changes in the attached Excel table:**

2. Detailed progress in RAN WGs since last TSG meeting (for all involved WGs)

 NOTE: Agreements and Open issues impacted cross-TSG aspects shall be explicitly highlighted

2.1 RAN1

2.1.1 Agreements

**In RAN1#122, the following agreements were made.**

Agreement

* Remove parameter to configure physical cell ID of on-demand SSB (i.e., *od-ssb-physCellId*) from OD-SSB configuration (i.e., *od-ssb-config*)

Agreement

Adopt the following TP for TS 38.214 Clause 5.2.1.4

**Reason for change:** To clarify that CSI report for an SCell configured with *od-ssb-config* cannot be configured with *eventType*

**Summary of change:** Add description that CSI report for an SCell configured with *od-ssb-config* cannot be configured with *eventType*

**Consequence if not approved:** Whether or not CSI report for an SCell configured with *od-ssb-config* can be configured with *eventType* is unclear

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| 5.2.1.4 Reporting configurations<omitted text>For a UE configured with *od-ssb-config* on a SCell and for CSI report with *CSI-ReportConfig* with higher layer parameter *reportQuantity* set to 'ssb-Index-RSRP', 'ssb-Index-SINR', 'ssb-Index-RSRP- Index', or 'ssb-Index-SINR- Index ' and not configured with *eventType* - if the UE is not provided *absoluteFrequencySSB* for the SCell, the CSI report configuration is associated with the SS/PBCH block configured by *od-ssb-config* and the UE reports SSBRI based on *SSB-index* corresponding to the currently transmitted SS/PBCH block.- if the UE is provided *absoluteFrequencySSB* for the SCell, the CSI report configuration is associated with both the SS/PBCH block configured by *od-ssb-config* and the SS/PBCH block provided by *absoluteFrequencySSB* and the UE reports SSBRI based on *SSB-index* corresponding to the currently transmitted SS/PBCH block(s) that may be the one configured by *od-ssb-config* and/or provided by *absoluteFrequencySSB* based on measurement requirements defined in [11, TS 38.133].- The UE reports SSBRI based on *SSB-index* corresponding to the currently transmitted SS/PBCH block, where the SSBRI *k* (*k* ≥ 0) corresponds to the configured (*k*+1)-th entry of the associated *csi-SSB-ResourceList* in the corresponding *CSI-SSB-ResourceSet.*The *reportConfigType* of CSI reporting configuration based on SS/PBCH block configured with *od-ssb-config* may be aperiodic or semi-persistent. |

**Agreement**

* Confirm the value range of *od-ssb-nrofBurst* for both FR1 and FR2
	+ For FR1, the value range of od-ssb-nrofBurst is {5, 10, 15, 20, 25, 30, 40, 50}.
	+ For FR2, the value range of od-ssb-nrofBurst is {25, 30, 40, 50, 75, 100, 150, 200}.
* Note: It is upto RAN4 whether to include smaller value than 25 for FR2.

**Agreement**

Adopt the following TP for TS 38.213 Clause 7.

**Reason for change:** The *od-ss-PBCH-BlockPower* is not provided for Case #2. For Case #2, if a UE obtains a downlink pathloss estimation based on reception of second SS/PBCH blocks (i.e., on-demand SSB), downlink transmit power of on-demand SSB is the same as the *ss-PBCH-BlockPower* for always-on SSB and there is no *od-ss-PBCH-BlockPower* in higher layer parameters

**Summary of change:** Add description for the case when *od-ss-PBCH-Block power* is absent in Case #2 to align the UE behaviour with RAN1 agreement.

**Consequence if not approved:** When *od-ss-PBCH-BlockPower* is not configured, UE cannot obtain a downlink pathloss estimation based on reception of second SS/PBCH blocks.

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| 7 Uplink power control-----------------------omitted text-----------------------In the remaining of this clause, if a UE obtains a downlink pathloss estimate based on reception of second SS/PBCH blocks, as described in Clause 4.4, *ss-PBCH-BlockPower* is replaced by *od-ss-PBCH-BlockPower* if provided. |
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Agreement:

Adopt the following TP for TS 38.214 Clause 4.1

**Reason for change**

* The SSS EPRE for OD-SSB in Case #1 is undefined
* The CSI-RS EPRE for CSI-RS that is QCLed to the OD-SSB in Case #1 is undefined

**Summary of change**

* The downlink SS/PBCH SSS EPRE can be derived from the SS/PBCH downlink transmit power given by the parameter *od-ss-PBCH-BlockPower* provided in *od-ssb-config* for SS/PBCH block transmitted according to Clause 4.4 of [6, TS 38.213].
* The downlink CSI-RS EPRE can be derived from the SS/PBCH block downlink transmit power given by the parameter *od-ss-PBCH-BlockPower* provided in *od-ssb-config* for SS/PBCH block transmitted according to Clause 4.4 of [6, TS 38.213]

**Consequence if not approved:**

* Undefined EPRE of SSS and CSI-RS for OD-SSB in Case #1

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| 4.1 Power allocation for downlink The gNB determines the downlink transmit EPRE.For the purpose of SS-RSRP, SS-RSRQ and SS-SINR measurements, the UE may assume downlink EPRE is constant across the bandwidth. For the purpose of SS-RSRP, SS-RSRQ and SS-SINR measurements, the UE may assume downlink EPRE is constant over SSS carried in different SS/PBCH blocks. For the purpose of SS-RSRP, SS-RSRQ and SS-SINR measurements, the UE may assume that the ratio of SSS EPRE to PBCH DM-RS EPRE is 0 dB. For the purpose of CSI-RSRP, CSI-RSRQ and CSI-SINR measurements, the UE may assume downlink EPRE of a port of CSI-RS resource configuration is constant across the configured downlink bandwidth and constant across all configured OFDM symbols.The downlink SS/PBCH SSS EPRE can be derived from the SS/PBCH downlink transmit power given by the parameter *ss-PBCH-BlockPower* provided by higher layers or *od-ss-PBCH-BlockPower* provided in *od-ssb-config* for SS/PBCH block transmitted according to Clause 4.4 of [6, TS 38.213]. The downlink SSS transmit power is defined as the linear average over the power contributions (in [W]) of all resource elements that carry the SSS within the operating system bandwidth. The downlink CSI-RS EPRE can be derived from the SS/PBCH block downlink transmit power given by the parameter *ss-PBCH-BlockPower* or *od-ss-PBCH-BlockPower* provided in *od-ssb-config* for SS/PBCH block transmitted according to Clause 4.4 of [6, TS 38.213] and CSI-RS power offset given by the parameter *powerControlOffsetSS* provided by higher layers if the SS/PBCH block is associated with serving cell PCI, or derived from *ss-PBCH-BlockPower-r17* in *SSB-MTC-AdditionalPCI-r17* and *powerControlOffsetSS* provided by higher layersif the SS/PBCH block is associated with additional PCI different from serving cell PCI, where the CSI-RS is QCLed with the SS/PBCH block. The downlink reference-signal transmit power is defined as the linear average over the power contributions (in [W]) of the resource elements that carry the configured CSI-RS within the operating system bandwidth. |

**Agreement**

* Adopt the following TP for TS 38.213 Clause 10

**Reason for change**: Puncturing of SSB bandwidth can be applicable for OD-SSB.

**Summary of changes**: Add “after puncturing if applicable”.

**Consequence if not approved**: Specification is confusing for puncturing of SSB.

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| **10 UE procedure for receiving control information**\*\*\* Unchanged parts are omitted \*\*\*For monitoring of a PDCCH candidate by a UE, if the UE- has received *ssb-PositionsInBurst* in *SIB1* and has not received *ssb-PositionsInBurst* in *ServingCellConfigCommon* for a serving cell, and- does not monitor PDCCH candidates in a Type0-PDCCH CSS set, and - at least one RE for a PDCCH candidate overlaps with at least one RE of a candidate SS/PBCH block, after puncturing if applicable, corresponding to a SS/PBCH block index provided by *ssb-PositionsInBurst* in *SIB1*, the UE is not required to monitor the PDCCH candidate.For monitoring of a PDCCH candidate by a UE, if the UE- has received *ssb-PositionsInBurst* in *ServingCellConfigCommon* for a serving cell, and- does not monitor PDCCH candidates in a Type0-PDCCH CSS set, and - at least one RE for a PDCCH candidate overlaps with at least one RE of a candidate SS/PBCH block, after puncturing if applicable, corresponding to a SS/PBCH block index provided by *ssb-PositionsInBurst* in *ServingCellConfigCommon*, the UE is not required to monitor the PDCCH candidate.For monitoring of a PDCCH candidate by a UE, if the UE- has received an indication for transmission of second SS/PBCH blocks on a serving cell as described in Clause 4.4, and- at least one RE for a PDCCH candidate overlaps with at least one RE of a candidate SS/PBCH block, after puncturing if applicable, from the second SS/PBCH blocks, corresponding to a SS/PBCH block index provided as described in Clause 4.4, the UE is not required to monitor the PDCCH candidate.For monitoring of a PDCCH candidate by a UE, if the UE- has received *ssb-PositionsInBurst* in *SSB-MTCAdditionalPCI* for a serving cell, and- at least one RE for a PDCCH candidate overlaps with at least one RE of a candidate SS/PBCH block, after puncturing if applicable, corresponding to a SS/PBCH block index provided by *ssb-PositionsInBurst* in *SSB-MTCAdditionalPCI* with same physical cell identity as the one associated with a RS having same quasi-collocation properties as a CORESET for the PDCCH candidate, the UE is not required to monitor the PDCCH candidate.A UE is not required to monitor PDCCH candidates for a Type0/0A/0B/1/1A /2/2A -PDCCH CSS set when the active TCI state for a corresponding CORESET is not associated with *physCellId* in *ServingCellConfigCommon*.\*\*\* Unchanged parts are omitted \*\*\* |

**Agreement**

Adopt the following TP for TS 38.213 Clause 11.1.1.

--------------------------------------------------- Start of Text Proposal for TS 38.213 ---------------------------------------------

**11.1.1 UE procedure for determining slot format**

< Unchanged parts are omitted >

For a set of symbols of a slot corresponding to SS/PBCH blocks with candidate SS/PBCH block indices corresponding to the SS/PBCH block indexes indicated to a UE by *ssb-PositionsInBurst* in *SIB1,* or by *ssb-PositionsInBurst* in *ServingCellConfigCommon*, as described in clause 4.1, or as described in Clause 4.4, or by *NonCellDefiningSSB* or, if the UE is not provided *dl-OrJointTCI-StateList*, by *ssb-PositionsInBurst* in *SSB-MTCAdditionalPCI* associated to physical cell ID with active TCI states for PDCCH or PDSCH, or for a set of symbols of a slot corresponding to SS/PBCH blocks configured for L1 beam measurement/reporting, the UE does not expect to detect a DCI format 2\_0 with an SFI-index field value indicating the set of symbols of the slotas uplink.

< Unchanged parts are omitted >

------------------------------------------------------- End of Text Proposal --------------------------------------------------------

**Agreement**

Adopt the following TP for TS 38.213 Clause 4.4.

**Reason for change:** Corrections on clause title of activation/deactivation of SS/PBCH block transmissions on a secondary cell.

**Summary of change:** In the title of clause 4.4 of TS 38.213, adaptation of SS/PBCH block transmissions on a secondary cell is captured.

**Consequence if not approved:** The adaptation of SS/PBCH block transmissions on a secondary cell is omitted in the title of clause 4.4 of TS 38.213.

---------------------------------------- Start of text proposal to TS 38.213 v19.0.0 ---------------------------------------

4.4 Activation/adaptation/deactivation of SS/PBCH block transmissions on a secondary cell

---------------------------------------- End of text proposal to TS 38.213 v19.0.0 ---------------------------------------

Agreement

**The following is supported for the value range of *od-sib1-windowStartOffset***

* **{sl0, sl1, sl2, sl4, sl8, sl10, sl20, sl40, sl80}**

**Agreement**

Adopt the following TP for Clause 5.3.2 and 6.3.3.1 in TS38.211 to clarify the PRACH transmission for SIB1 request.

--------------------------------- start of TP for 38.211-------------------------------------

**5.3.2 OFDM baseband signal generation for PRACH**

<omitted text>

- is the subcarrier spacing of the initial uplink bandwidth part during initial access. If the PRACH transmission is for a candidate cell is provided by *ltm-PRACH-SubcarrierSpacing* in *EarlyUL-SyncConfig*. If the PRACH transmission is for SIB1 request, is provided by *msg1-SubcarrierSpacing* in *SIB1-RequestConfig*. Otherwise,  is the subcarrier spacing of the active uplink bandwidth part;

- $µ\_{0} $is the largest $µ$ value among the subcarrier spacing configurations by the higher-layer parameter *scs-SpecificCarrierList*;

- $N\_{BWP,i}^{start}$ is the lowest numbered resource block of the initial uplink bandwidth part and is derived by the higher-layer parameter *initialUplinkBWP* or *initialUplinkBWP-RedCap* during initial access and from the higher-layer parameters *bwp-GenericParameters* in *EarlyUL-SyncConfig* if the PRACH transmission is for a candidate cell, and from the higher-layer parameter *locationAndBandwidth* in *SIB1-RequestConfig,* if the PRACH transmission is for SIB1 request. Otherwise, $N\_{BWP,i}^{start}$ is the lowest numbered resource block of the active uplink bandwidth part and is derived by the higher-layer parameter *BWP-Uplink*;

<omitted text>

**6.3.3.1 Sequence generation**

<omitted text>

There are 64 preambles defined in each time-frequency PRACH occasion, enumerated in increasing order of first increasing cyclic shift  of a logical root sequence, and then in increasing order of the logical root sequence index, starting with the index obtained from the higher-layer parameter *prach-RootSequenceIndex* or *rootSequenceIndex-BFR* or by *msgA-PRACH-RootSequenceIndex* if configured and a type-2 random-access procedure is initiated as described in clause 8.1 of [5, TS 38.213] or by *prach-RootSequenceIndex* in *EarlyUL-SyncConfig* if the PRACH transmission is for a candidate cell or by *prach-RootSequenceIndex* in *SIB1-RequestConfig* if the PRACH transmission is for SIB1 request. Additional preamble sequences, in case 64 preambles cannot be generated from a single root Zadoff-Chu sequence, are obtained from the root sequences with the consecutive logical indexes until all the 64 sequences are found. The logical root sequence order is cyclic; the logical index 0 is consecutive to $L\_{RA}-2$. The sequence number  is obtained from the logical root sequence index according to Tables 6.3.3.1-3 to 6.3.3.1-4B.

--------------------------------- end of TP for 38.211-------------------------------------

**Agreement**

Adopt the following 38.211 TP1 to clarify the reference point of DMRS for PDCCH scheduling OD-SIB1 and PDSCH carrying OD-SIB1 should be based on the *controlResourceSetZero* provided by UL WUS configuration from cell A instead of the one configured by the PBCH or by the *controlResourceSetZero* field in the *PDCCH-ConfigCommon* IE.

* **Reason for change:**
	+ UE behavious of OD-SIB1 reception are different from legacy SIB1 reception.
	+ The reference point for DMRS for PDCCH is different when SIB1 is periodically transmitted or when SIB1 is on-demand triggered.
* **Summary of change:**
	+ The reference point for DMRS for Type 0 PDCCH scheduling OD-SIB1 is subcarrier 0 of the lowest-numbered resource block in the CORESET0.
* **Consequences if not approved:**
	+ The reference point for PDCCH scheduling OD-SIB1 and PDSCH carrying OD-SIB1 is different, which is different from legacy UE behaviours.
	+ The reference point for PDCCH will change frequently with the change of NES state, which may bring more UE complexity.

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| **<TP 1>****3GPP TS 38.211 V18.6.0 (2025-03)**7.4.1.3.2 Mapping to physical resourcesThe UE shall assume the sequence $r\_{l}\left(m\right)$ is mapped to resource elements $\left(k,l\right)\_{p,??}$ according towhere the following conditions are fulfilled- they are within the resource element groups constituting the PDCCH the UE attempts to decode if the higher-layer parameter *precoderGranularity* equals *sameAsREG-bundle*,- all resource-element groups within the set of contiguous resource blocks in the CORESET where the UE attempts to decode the PDCCH if the higher-layer parameter *precoderGranularity* equals *allContiguousRBs*.The reference point for $k$ is - subcarrier 0 of the lowest-numbered resource block in the CORESET if the CORESET is configured by the PBCH or by the *controlResourceSetZero* field in the *PDCCH-ConfigCommon* IE or by the *controlResourceSetZero* field in the *SIB1-RequestConfig*.- subcarrier 0 in common resource block 0 otherwiseThe quantity $l$ is the OFDM symbol number within the slot.The antenna port $p=2000$.A UE not attempting to detect a PDCCH in a CORESET shall not make any assumptions on the presence or absence of DM-RS in the CORESET. |

**Agreement:**

Adopt the following TP1 to clarify the *k-ssb* provided by UL WUS configuration from cell A should be used to determine CORESET0 offset referenced in Clause 13.

***---------------------------------------Start of TP#1 for section 23 of TS 38.213--------------------------------------***

**23 UE procedure to request SIB1 reception**

Unless otherwise mentioned, the higher layer parameters in this clause and in referenced clauses are provided by *SIB1-RequestConfig* on a first cell.

**<Unchanged text omitted>**

where $k\_{SSB}$ for determining the common resource block [4, TS 38.211] and frequency offset for the CORESET referenced in Clause 13 is provided by *k-ssb*.

***---------------------------------------End of TP#1 for section 23 of TS 38.213--------------------------------------***

**Agreement**

The Draft LS in R1-2506586 in endorsed. The final LS in R1-2506587.

**Conclusion**

With respect to LS R1-2505118, there is no change in RAN1 specifications, e.g., no change to $n\_{RA}$ calculation in 38.211.

2.1.2 Remaining Open issues

None

2.2 RAN2

2.2.1 Agreements

**In RAN2#131, the following agreements were made.**

R2-2506211 Summary report of [AT131][101][NES] (Apple) Apple discussion Rel-19 Netw\_Energy\_NR\_enh-Core

Agreeable proposals

Proposal 1 (13/15) maxNrofOD-SSB is set to 16.

Proposal 2 (13/15) RAN2 don’t pursue further optimization of MAC-CE format.

Proposal 3 (14/15) Following RAN1 conclusion, not support implicit deactivation with RRC-based activation. The following revisions to be reflected in RRC running CR:

• od-ssb-ActivationStatus: Indicates the activation status of this OD-SSB pattern upon configuration. Only one OD-SSB pattern can be activated at one point of time.

• od-ssb-nrofBurst: Indicates the number of OD-SSB bursts to be transmitted after OD-SSB is activated. Network only configures this field when od-ssb-ActivationStatus is absent.

Proposal 4 (7/13) The following Rel-19 PEI configurations with the same value range (except pei-FrameOffset-r19) as Rel-17 PEI configuration need to be introduced.

o po-NumPerPEI-r19

o payloadSizeDCI-2-7-r19

o pei-FrameOffset-r19: extend to 32 radio frame

Proposal 5 (15/15) Adopt the following information structure of paging adaptation

• If network supports paging adaptation, both pagingAdaptation-NS-r19 and pagingAdaptationNAndPagingFrameOffset are configured.

• pagingAdaptation-NS-r19, pagingAdaptationNAndPagingFrameOffset and firstPDCCH-MonitoringOccasionOfPO are grouped together in one IE. pagingAdaptation-NS-r19, pagingAdaptationNAndPagingFrameOffset are mandatory in this IE. firstPDCCH-MonitoringOccasionOfPO-r19 is optionally configured in the IE.

Proposal 8: Revise the type of od-ssb-nrofBurst as ENUMERATED {5, 10, 15, 20, 25, 30, 40, 50, 75, 100, 150, 200}.

Proposal 9: OD-SSB SMTC adaptation apply to both inter and intra frequency measurement, and it should be clear which SMTC to use for the UE. It is up to RRC CR Rapporteur how to capture it in running CR.

Proposal 10: On od-SSB-periodicity, remove default value of 5ms and change the presence to mandatory.

Proposal 11: For Case#2, if the PBCH block power or SSB sub-carrier spacing or absolute frequency for OD-SSB is not configured, the UE applies the same value configured for the always-on SSB. RRC running CR to reflect this agreement in the field description.

Proposal 12: Adopt the change suggested by Proposal 5 of R2-2505507.

Proposal 13: Adopt the following revised correction on OD-SIB1:

5.2.2.4.2x Actions upon reception of SIBxx

~~1> if the UE has (re)selected to a cell providing OD-SIB1, the UE stores the configuration for SIB1 request for this cell and considers it valid while camping in this cell:~~

2> store the SIBxx;

2> SIB1 request configuration in the SIBxx is valid for acquiring OD-SIB1 of this cell in accordance with clause 5.2.3.3.x;

2> SIB1 request configuration of another cell in this stored SIBxx is valid for acquiring OD-SIB during reselection to that cell, and after reselection to that cell if the stored SIBxx is a valid version for that cell in accordance with clause 5.2.2.2.1;

Proposal 14: If firstPDCCH-MonitoringOccasionOfPO-r19 is not configured, UE does not determine POs based on starting PDCCH monitoring occasion number. The starting PDCCH monitoring occasion number of (i\_s + 1)th PO is equal to i\_s \* S\*X.

Proposal 15: When pagingAdaptationPEI-Config is signaled in system information, pagingAdaptationFirstPDCCH-MonitoringOccasionOfPEI-O-r19 should be configured.

* **All proposals above (proposal 1 - 5, and 8 - 15) are agreed.**

R2-2506231 TP for SSB adaptation Huawei discussion Rel-19 Netw\_Energy\_NR\_enh-Core

* **TP in R2-2506231 is baseline.**
* **Following RAN2#130 agreement, move new servingCellMO for OD-SSB under ServingCellConfig (i.e. servingCellMO is per SCell configuration rather than per OD-SSB configuration).**
* **Move SMTC for OD-SSB under MeasObjectNR and add procedure text.**

Proposal 5 (RRC open issue 3): Move the following OD-SSB IEs which can’t be dynamically adapted via MAC-CE under SCellConfig (i.e. they can only be reconfigured by RRC rather than by MAC-CE)

• od-ssb-sfn-Offset-r19

• od-ssb-halfFrameIndex-r19

• od-ssb-absoluteFrequency-r19

• od-ssbSubcarrierSpacing-r19

• od-ss-PBCH-BlockPower-r19

* **Agree with the intention of proposal 5.**
* **How to implement it to RRC is left to RRC rapporteur.**

R2-2506215 Text proposal for option 1 Xiaomi discussion Rel-19 Netw\_Energy\_NR\_enh-Core

* **TP in R2-2506215 is baseline.**
* **TP is updated that measurement on CSI-RS is allowed as legacy.**
* **RAN2 understand the current definition of intra-F measurement ad inter-F measurement is kept even for OD-SSB case.**
* **SIB 1 request is supported for both SUL and NUL.**
* **RSRP threshold for UL carrier selection is included in SIB1 request configuration.**
* **Agree with the intention, but the existing conditions that has same meaning as “a cell is providing OD-SIB1” will be used. It is only applicable to RRC connected state. How to implement is up to RRC rapporteur.**
* **Agree to include the similar description in the field description of *si-BroadcastStatus*.**
* **NW may configure any Kssb upon SI change notification (including ETWS/CMAS), but NES UE still acquires the updated SIB1 without performing OD-SIB1 REQ procedure.**

R2-2506218 TP on SIB1 update upon reception of short message Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core

* **TP in R2-2506218 is baseline.**
* **For co-existence of on-demand SIB1 and SDT, do nothing.**
* **OD-SIB1 cell can be target cell of HO but no spec change is required.**
* **The OD-SIB1 capability is defined as optional with capability signaling to assist the dedicated reselection priority configuration at network side.**
* **OD-SIB1 capability is not included into paging container.**
* **As legacy, keep IE firstPDCCH-MonitoringOccasionOfPO-r19 with symbol level and without NW restriction on ssb-periodicityServingCell. Adopt the following ASN.1 format to support Ns=8 and N=T/32.**
* **As legacy, keep IE firstPDCCH-MonitoringOccasionOfPEI-O-r19 with symbol level. Adopt the following ASN.1 format to support up to 8 PEI-O per PF and 32 radio frames:**
* **firstPDCCHMonitoringOccasionOfPO-r19 is introduced both PCCH-Config and PDCCH-ConfigCommon.**
* **firstPDCCH-MonitoringOccasionOfPEI-O-r19 is only introduced in PDCCH-ConfigCommon, not in PCCH-Config.**
* **We don’t consider any optimization for the combination of paging adaptation and RACH adaptation.**
* **Option 1b (a same featureCombinationPreamblesList-r17 applies to both legacy and additional RACH, and R2 keep the conclusion, allow mixing of CE feature and non-CE feature in the same RACH-ConfigCommon, and clarify in the MAC spec that if CE is applicable for random access procedure and RACH-ConfigCommon associated with selected random access resource set includes additional RO, UE does not use additional RO configured in this RACH-ConfigCommon.) is agreed.**
* **TP in R2-2505789 is baseline for MAC update.**

2.2.2 Remaining Open issues

None

2.3 RAN3

2.3.1 Agreements

**In RAN3#129, the following agreements were made.**

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| [R3-255077](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255077.zip) | (BL CR to 38.300) Introduction of Network Energy Saving Enhancement (CATT, Ericsson, Huawei, Samsung, China Telecomm, Rakuten, ZTE, CMCC, Lenovo, Deutsche Telekom, Nokia) | draftCR **Endorsed as Baseline CR** |
| [R3-255078](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255078.zip) | (BL CR to 38.470) Introduction of Network Energy Saving Enhancement (Samsung, Huawei, NEC, CATT, ZTE, Ericsson) | CR0161r4, TS 38.470 v18.5.0, Rel-19, Cat. B **Endorsed as Baseline CR** |
| [R3-255079](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255079.zip) | (BL CR to 38.420) Introduction of Network Energy Saving Enhancement (ZTE Corporation, Samsung, Lenovo, Huawei, Qualcomm, Ericsson, CATT, Nokia, Rakuten, NEC) | CR0049r2, TS 38.420 v18.1.0, Rel-19, Cat. B **Endorsed as Baseline CR** |
| [R3-255080](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255080.zip) | Introduction of Network Energy Saving Enhancement (Ericsson, Huawei, CMCC, Samsung, Qualcomm, Nokia, ZTE, Lenovo, Deutsche Telekom, NEC, CATT, China Unicom, Jio Platforms, Rakuten) | CR1436r9, TS 38.423 v18.6.0, Rel-19, Cat. B **Endorsed as Baseline CR** |
| [R3-255081](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255081.zip) | (BL CR to 38.473) Introduction of Network Energy Saving Enhancement (Huawei, Ericsson, CMCC, Samsung, ZTE, Nokia, Deutsche Telekom, Lenovo, NEC, Jio Platforms, CATT, Qualcomm) | CR1531r7, TS 38.473 v18.6.0, Rel-19, Cat. B **Endorsed as Baseline CR** |
| [R3-255636](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255636.zip) | (TP to BLCR for TS 38.470) On-demand SSB SCell operation (Samsung) | otherRev in [R3-255826](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CChair%5CAgenda%5CInbox%5CR3-255826.zip) (TP to BLCR for TS 38.470) Support of on-demand SIB1* Add Deutsche Telekom, ZTE, Rakuten, Verizon, Samsung, CATT, Verizon, NEC, Ericsson, Nokia to co-sources

Rev in [R3-255955](file:///C%3A%5CUsers%5Cenimaji%5CDownloads%5CInbox%5CR3-255955.zip) Agreed |
| Agreements: it is agreed that the below proposals are not needed:• Over Xn, exchange OD-SSB state and OD-SSB request• The DU should inform the CU when the OD-SSB is being broadcast• CU may request DU to send OD-SSB to obtain L3 measurements?Conclusion: there is no consensus for the below items.• Related to if to reuse Rel-18 Cells Allowed … List IE or a create new List for CU to indicate DU a list of cells for OD-SIB1 or do nothing:**New servingCellMO IE for OD-SSB should be introduced to the SCell To Be Setup List IE**HW, ZTE, Nok: support the proposal, aligning with RAN2 agreementsSeems agreeable pending further checking of RAN2 agreements |
| [R3-255240](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255240.zip) | (TP to BLCR for TS 38.473, TS 38.423 and TS 38.420) Discussion on on-demand SIB1 for UEs in idle or inactive mode (Huawei) | otherRev in [R3-255808](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CChair%5CAgenda%5CInbox%5CR3-255808.zip) (TP to BLCR for TS 38.473) Discussion on on-demand SIB1 for UEs in idle or inactive mode* Add Rakuten, Verizon, Qualcomm as co-sources
* 8.2.5.2: Change text color from red to black

Rev in [R3-255952](file:///C%3A%5CUsers%5Cenimaji%5CDownloads%5CInbox%5CR3-255952.zip) **Agreed** |
| [R3-255248](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255248.zip) | (TP to BLCR for TS 38.300) On remaining issues of OD-SIB1 (CATT) | otherRev in [R3-255809](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CChair%5CAgenda%5CInbox%5CR3-255809.zip)* Change “can inform” to “informs”
* Add Deutsche Telekom, ZTE, Rakuten, Verizon, Samsung to co-sources

Rev in [R3-255953](file:///C%3A%5CUsers%5Cenimaji%5CDownloads%5CInbox%5CR3-255953.zip) **Agreed unseen** |
| [R3-255255](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255255.zip) | (TP to BL CR 38.401) Stage-2 procedures for OD SIB1 (Qualcomm Inc.) | otherRev in [R3-255807](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CChair%5CAgenda%5CInbox%5CR3-255807.zip)  **Agreed** |
| [R3-255306](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255306.zip) | (TPs to BL CR for TS38.420, TS38.470 and TS38.473) Support of on-demand SIB1 (ZTE Corporation) | otherRev in [R3-255810](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CChair%5CAgenda%5CInbox%5CR3-255810.zip) (TP to BL CR for TS38.420) Support of on-demand SIB1* Add Ericsson, Rakuten, DT, NEC, Nokia, Verizon, Vodafone to co-sources

Rev in [R3-255954](file:///C%3A%5CUsers%5Cenimaji%5CDownloads%5CInbox%5CR3-255954.zip) **Agreed** |
| [R3-255578](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CDocs%5CR3-255578.zip) | Xn impact of On-demand SIB1 for UEs in idle/inactive mode (Ericsson, Deutsche Telekom, China Unicom, Jio Platforms) | otherRev in [R3-255806](file:///C%3A%5CUsers%5Cq12059%5CDocuments%5C3GPP%20RAN3%5CRAN3%20Meetings%5CRAN3_129%20%28Aug%202025%2C%20Bangalore%29%5CChair%5CAgenda%5CInbox%5CR3-255806.zip)* Add Rakuten, Verizon, Qualcomm as co-sources

Rev in [R3-255951](file:///C%3A%5CUsers%5Cenimaji%5CDownloads%5CInbox%5CR3-255951.zip) **Agreed** |
| For the class 1 procedures: **Change the procedure and message name from “UL WUS Configuration Provision” to “OD-SIB1 Configuration Provision”****Change from NR CGI at NG-RAN node1 (Naming FFS) to NES Cell ID****Change from NR CGI at NG-RAN node2 (Naming FFS) to Cell A ID**Please all TP using the name above for the procedure, messagesFor the class 2 procedures: **UL WUS CONFIGURATION PROVISION STATUS UPDATE => OD-SIB1 Configuration Provision Status Update**Please all TP using the name above for the procedure, messagesThe structure of the class 2 message**In the class 2 message “OD-SIB1 Configuration Provision Status Update”, it is agreed to include “NES Cell ID” as Mandatory presented.****Cell A ID is optionally presented.** To capture in the class 1 procedure that:**If Cell A ID IE is included in the provision request, then Cell A gNB shall, if support, broadcast the OD-SIB1 configuration in the indicated Cell A.**To capture in the Class 2 procedure text:**If Cell A ID IE is present, this message indicates that the indicated Cell A has stopped the broadcasting.** **If Cell A ID IE is not present, then all the Cell A(s) have stopped the broadcasting for the given NES Cell.**The below proposals have no consensus, and we have agreed not to proceed.• the “Update option/code point” in the class 1 message OD-SIB1 Configuration Provision Request.• Include multiple OD-SIB1 configurations in a REQUEST message (and partial success in RESPONSE message)• NES gNB-CU sends a list of the Cell List OD-SIB1 status to NES gNB-DU over F1.• Cell A to NES Cell to have a list of Cell status in the class 2 update over Xn• Exchange OD-SIB1 provision capabilities**If Cell A ID is included in the OD-SIB1 Configuration Provision Request message, then it shall be included in the OD-SIB1 Configuration Provision Response message. Capture this in specifications.** |
| Agreements: it is agreed that the below proposals are not needed:• For PRACH adaptation: impact on Rel-19 additional PRACH resources on the legacy RACH optimization feature• For paging adaptation: the DU decides “paging energy saving mode” and informs the CU. gNB-DU informs the gNB-CU about not be transmitted Paging message over the air due to shortage of paging resources.**Introduce new per-cell PEI adaptation indication over F1 and stage 2 description**CATT, ZTE, Nok: Agree with the proposal, aligns with RAN2 agreement |

2.3.2 Remaining Open issues

None

2.4 RAN4

2.4.1 Agreements

**Core Part**

**In RAN4#116, the following agreements were made.**

**OD-SSB**

**Issue 1-1-1: OD-SSB in FMW collided with MG**

**Agreement**

* UE is allowed to skip the OD-SSB measurement if OD-SSB in FMW collides with MG occasion.
	+ ‘Kp’ should be introduced to extend the FMW length.

**Issue 1-1-2: UE’s behaviour when OD-SSB further activation/reconfiguration within T2**

**Agreement**

* The UE should follow legacy deactivated SCell measurements after T2.

**Issue 1-1-3: FMW clarification**

**Agreement**

* The actual FMW measurement duration equals min(Treport , Tidentify) from the end of uncertain time.
	+ Treport is the first OD-SSB based L3 measurement reporting
	+ Tidentify equals the minimum RAN4 OD-SSB meas. period requirement as follow.
		- A detected cell: OD-SSB based measurement period
		- A newly detectable cell: OD-SSB based cell identification period
	+ Note: The UE can stop doing fast measurements after time Tidentify even if no measurement report has been sent to the network.

**Issue 1-1-4: Requirement for RAN1 Alt Time-C2**

**Agreement**

* RAN4 to define the requirement for Alt Time-C2 only based on the OD-SSB periodicity.
	+ It applies to deactivated SCell L3 measurement
	+ It applies to L1 measurement after the SCell activation [command].
	+ No scheduling restriction is expected for AO-SSB outside the SMTC in Alt Time-C2.

**Issue 1-2-1: OD-SSB based L3 measurement when SCell is activated(scenario 3B)**

**Agreement**

* For SCell measurement, UE shall follow the OD-SSB specific SMTC when OD-SSB is activated; For neighbor cell measurement, UE follows legacy SMTC regardless of status of OD-SSB.

**Issue 1-3-1: The known cell condition in Case 2**

**Agreement**

* The known cell condition agreement for Case 2 Alt Time-C1 can be applied to Alt Time-C2.

**Issue 1-3-2: Multiple OD-SSBs based deactivated SCells measurement**

**Agreement**

* In deactivated SCell stage, when the time periods from OD-SSB activation to deactivation among multiple OD-SSBs’ frequency layers are non-overlapping.
	+ the requirement of deactivated SCells measurement with multiple OD-SSBs SCell shall be the same as the deactivated SCells measurement requirement for single OD-SSB.
* Otherwise, NO requirements

**Issue 1-3-3: Multiple OD-SSBs based SCells activation**

**Agreement**

* RAN4 to define the multiple OD-SSB based SCells activation delay requirements.
	+ Reuse the principle of legacy multiple SCells activation requirements
	+ For case1, at least one of the OD-SSB activation command comes together with SCell activation command
	+ No requirements if two or more SCells’ OD-SSBs transmission are overlapped in the deactivated SCell stage.

**Issue 1-4-1: Additional Processing time for OD-SSB parameter update**

**Agreement**

* RAN4 should apply the same UE capability with 2ms and 5 ms for OD-SSB parameter updating.
	+ Note 1: Based on the RAN1 spec, the additional processing time is only applied to L1 and L3 measurement transition period after the SCell is activated.

**Issue 1-4-2: OD-SSB deactivation timeline**

**Agreement**

* RAN4 not to introduce additional processing time for OD-SSB deactivation.

**Issue 1-4-3: Additional Processing time for joint OD-SSB and SCell activation**

**Agreement**

* Not introduce an UE capability for OD-SSB processing with the same values as for MAC CE based OD-SSB activation for the deactivated SCell.
* The issue of “additional Processing time for joint OD-SSB and SCell activation” is closed.
* Not define test case for verifying OD-SSB and Scell activation command come together and the OD-SSB is transmitted immediately after T\_HARQ+3ms when the Scell is a known cell.

**Issue 1-4-4: OD-SSB based L3 reporting**

**Agreement**

The discussion of the issue shall not impact the RAN4 core part completion of the WI.

**Issue 1-4-5: OD-SSB interruption spec. impact**

**Agreement**

* Discuss in the CR directly.

**Issue 1-4-6: OD-SSB interruption requirements**

**Agreement**

* Discuss in the CR directly.

**Issue 1-4-7: Cell identification**

**Agreement**

* If UE has already measured OD-SSB for Tidentify\_intra\_without\_index\_ODSSB or Tidentify\_intra\_with\_index\_ODSSB and the OD-SSB deactivated period is within 5s and the SCell is detectable when OD-SSB is transmitted, then the OD-SSB is activated again and the SCell remain detectable with the same spatial reception parameter and same frequency, UE shall skip the OD-SSB identification component provided the timing to that cell has not changed more than ± 3200/$2^{µ}$ Tc.
* Note: Option 2 can be discussed in maintenance stage.

**Issue 1-4-8: L1 measurement – collision with CSI-RS**

**Agreement**

* When OD-SSB colliding with CSI-RS, existing L1 measurement restriction can apply.

**Issue 1-5-1: Requirement for Alt scenario 3 (OD-SSB and AO-SSB are within different frequencies)**

**Agreement**

* RAN4 NOT to define the requirements when OD-SSB and AO-SSB are within different frequencies.
	+ Issue 1-5-1(Requirement for Alt scenario 3), Issue 1-5-2(Neighbour cell measurement for scenario 3), Issue 1-5-3(Serving cell measurement for scenario 3), Issue 1-5-4(SCell activation for scenario 3), Issue 1-5-5(Measurement reporting for scenario 3), Issue 1-5-6(AO-SSB and OD-SSB CA combination) are closed

**SSB adaptation**

**Issue 1-1-1: Applicable scenario for SSB adaption**

**Agreement**

RAN4 not to define requirement for DCI based SSB adaption for deactivated SCell measurement and SCell activation.

* Note: this RAN4 agreement does not intend to impact the discussion and decision in other WGs.

**Issue 1-2-2: L1 requirements – Measurement restriction impact**

**Agreement**

* When adapted SSB colliding with CSI-RS, existing L1 measurement restriction can apply.

**Issue 1-3-1: Colliding with MG**

**Agreement**

* If the SMTC occasion of the selected additional SMTC configuration collides with MG occasion, the UE is allowed to skip measurements in the overlapping SMTC occasion of the serving SCell.

**Issue 1-3-2: L3 requirements impacts**

**Agreement**

As per the agreement of issue 1-1-1, the issue is closed.

**Issue 1-4-1: SCell activation requirement for SSB adaptation – applicable SCell activation requirements**

**Agreement**

As per the agreement of issue 1-1-1, the issue is closed.

**Issue 1-4-3: SCell activation requirement for SSB adaptation – Others**

**Agreement**

As per the agreement of issue 1-1-1, the issue is closed.

**OD-SIB1**

**Issue 2-1-1: RRM requirements impacts for OD-SIB1**

**Agreement**

Keep current agreement and if companies think additional requirements are needed discuss in maintenance stage.

**Performance Part**

**In RAN4#116, the following agreements were made.**

**Sub-topic 3-1: OD-SSB performance part**

**Agreement**

RAN4 to at least define the following OD-SSB test cases.

* SCell activation in Case 1
* Intra-frequency measurement(deactivated SCell) in Case 1
* L1-RSRP measurement with OD-SSB parameter update(Scenario 3B)

**Sub-topic 3-3: SSB adaptation performance part**

**Agreement**

RAN4 to at least define the following SSB adaptation test case.

* L3 intra-frequency measurement

2.4.2 Remaining Open issues

* Performance requirements and test cases for the network energy saving techniques.

2.5 RAN5

n/a

2.5.1 Agreements

2.5.2 Remaining Open issues

2.5.3 Remaining Open issues with cross-WG dependencies

2.6 RAN6

n/a

2.6.1 Agreements

2.6.2 Remaining Open issues

3. Detailed progress in SA/CT WGs since last TSG meeting (for all involved WGs)

NOTE: This section only needs to be filled in for WI/SIs where there is a corresponding relevant WI/SI in SA/CT.

n/a

3.1 SAx/CTs

3.1.1 Agreements with cross-TSG impacts

3.1.2 Remaining Open issues with cross-TSG impacts

NOTE: This section should also flag any critical dependencies that need TSG attention.

4. References

NOTE: This can be e.g. a list of all related Tdocs in the affected WGs since last TSG, references to LSs, produced TRs/TSs, the work/study item description or status reports of previous TSGs.

4.1 List of RAN WG1 contributions

4.1.1 RAN1#122

R1-2505136 On-demand SSB SCell Operation Nokia, Nokia Shanghai Bell

R1-2505137 On-demand SIB1 for Idle/Inactive mode UEs Nokia, Nokia Shanghai Bell

R1-2505138 Adaptation of common signal/channel transmissions Nokia, Nokia Shanghai Bell

R1-2505257 On-demand SSB SCell Operation Google

R1-2505258 On-demand SIB1 for Idle/Inactive Mode UE Google

R1-2505259 Adaptation of Common Signals Google

R1-2505327 Maintenance on on-demand SSB SCell operation CATT

R1-2505328 Maintenance on on-demand SIB1 CATT

R1-2505329 Maintenance on adaptation of common signal/channel transmissions CATT

R1-2505355 Maintenance on on-demand SSB SCell operation for eNES Huawei, HiSilicon

R1-2505356 Maintenance on on-demand SIB1 for eNES Huawei, HiSilicon

R1-2505357 Maintenance on common channel/signal adaptation for eNES Huawei, HiSilicon

R1-2505378 Maintenance on on-demand SSB Scell operation vivo

R1-2505379 Maintenance on on-demand SIB1 for idle/inactive Ues vivo

R1-2505380 Maintenance on adaptation of common signal/channel transmissions vivo

R1-2505542 Remaining issues on on-demand SSB SCell operation Samsung

R1-2505543 Remaining issues on on-demand SIB1 for idle/inactive mode UEs Samsung

R1-2505544 Remaining issues on adaptation of common signal/channel transmissions Samsung

R1-2505595 Discussion on on-demond SSB for NES ZTE Corporation, Sanechips

R1-2505596 Discussion on on-demand SIB1 for NES ZTE Corporation, Sanechips

R1-2505597 Discussion on common signal channel for NES ZTE Corporation, Sanechips

R1-2505663 Discussion on on-demand SSB SCell operation Ofinno

R1-2505704 Remaining issue for on demand SSB SCell operation OPPO

R1-2505705 Remaining issue for on demand SIB1 for idle/inactive mode UE OPPO

R1-2505706 Remaining issue for common signal/channel transmission OPPO

R1-2505826 Maintenance on on-demand SIB1 for idle and inactive mode UEs Ericsson

R1-2505843 Remaining issues on on-demand SSB SCell operation LG Electronics

R1-2505844 Remaining issues on adaptation of common signal/channel transmissions LG Electronics

R1-2505877 Remaining issues on on-demand SSB SCell operation Apple

R1-2505878 Remaining issues on on-demand SIB1 for IDLE/INACTIVE mode UEs Apple

R1-2505879 Remaining issues on adaptation of common signal/channel for NES enhancements Apple

R1-2505973 Remaining issues on on-demand SSB SCell operation Fujitsu

R1-2505993 Maintenance for R19 NES adaptation of common signal/channel transmissions Ericsson

R1-2506009 Maintenance on the SSB indexes of SSB-RO mapping for NES Sharp

R1-2506033 On-demand SSB SCell operation MediaTek Inc.

R1-2506034 On-demand SIB1 for idle or inactive mode UEs MediaTek Inc.

R1-2506035 Adaptation of common signal/channel transmissions MediaTek Inc.

R1-2506055 Remaining issues on on-demand SSB SCell operation ETRI

R1-2506056 Remaining issues on SSB and PRACH time domain adaptations ETRI

R1-2506079 Maintenance of on-demand SSB SCell operation CMCC

R1-2506080 Maintenance of adaptation of common signal/channel transmission CMCC

R1-2506181 On-demand SSB operation for Scell Qualcomm Incorporated

R1-2506182 Adaptation of common channel transmissions Qualcomm Incorporated

R1-2506251 Maintenance on adaptation of common signal/channel transmissions Sharp

R1-2506318 Discussion on on-demand SSB SCell operation ITRI

R1-2506376 Maintenance on on-demand SSB SCell operation Ericsson

R1-2506399 FL summary 1 for on-demand SIB1 in idle/inactive mode Moderator (MediaTek)

R1-2506400 FL summary 2 for on-demand SIB1 in idle/inactive mode Moderator (MediaTek)

R1-2506401 FL summary 3 for on-demand SIB1 in idle/inactive mode Moderator (MediaTek)

R1-2506402 FL summary 4 for on-demand SIB1 in idle/inactive mode Moderator (MediaTek)

R1-2506493 Summary #1 of on-demand SSB for NES Moderator (LG Electronics)

R1-2506494 Summary #2 of on-demand SSB for NES Moderator (LG Electronics)

R1-2506521 Summary #1 of AI 8.5.3 for R19 NES Moderator (Ericsson)

R1-2506545 Summary #2 of AI 8.5.3 for R19 NES Moderator (Ericsson)

R1-2506560 Session notes for 8.5 (Maintenance on Enhancements of network energy savings for NR) Ad-Hoc Chair (Ericsson)

R1-2506586 [Draft] reply LS on RA-RNTI for PRACH adaptation Moderator (Ericsson)

R1-2506587 Reply LS on RA-RNTI for PRACH adaptation RAN1, Ericsson

R1-2506596 Summary #3 of on-demand SSB for NES Moderator (LG Electronics)

4.2 List of RAN WG2 contributions

4.2.1 RAN2#131

R2-2505051 Reply LS on new servingCellMO of OD-SSB on SCell (R4-2508440; contact: Apple), RAN4, Apple.

R2-2505496 Running 38.304 CR for network energy saving, Apple (Rapporteur), 38.304 running CR.

R2-2505497 Summary report of [POST130][108][NES] 38.304 CR (Apple) , Apple (Rapporteur).

R2-2505564 Introduction of Network Energy Savings Enhancements, Huawei, HiSilicon, 38.300 running CR.

R2-2505699 Introduction of enhancements for network energy efficiency, Ericsson, 38.331 running CR.

R2-2505708 Report of [POST130][107][NES] (Ericsson), Ericsson.

R2-2505791 Report of [POST130][109][NES] Comments to 38.321 CR for NES, InterDigital.

R2-2505792 Introduction of network energy saving enhancements to TS 38.321, InterDigital, 38.321 running CR.

R2-2505987 Introduction of UE capability for network energy saving enhancement in TS 38.306, ZTE Corporation, Sanechips, 38.306.

R2-2505988 Introduction of UE capability for network energy saving enhancement in TS 38.331, ZTE Corporation, Sanechips, 38.331.

R2-2505097 Remaining open issues on OD-SSB SCell operation LG Electronics France

R2-2505113 Discussion on On-Demand SSB OPPO.

R2-2505168 Consideration on on-demand SSB SCell operation CATT.

R2-2505254 On-demand SSB SCell Operation Samsung.

R2-2505276 Some details on OD-SSB for NES cell Quectel.

R2-2505315 Remaining open issues on OD-SSB Xiaomi.

R2-2505338 Remaining issues of On-demand SSB SCell operation vivo.

R2-2505498 Remaining issues on on-demand SSB for SCell Apple.

R2-2505506 Remaining issues on on-demand SSB SCell operation Fujitsu .

R2-2505526 Discussion on on-demand SSB SCell operation NTT DOCOMO, INC.

R2-2505566 Remaining issues on OD-SSB Sharp

R2-2505790 Remaining issues for On demand SSB InterDigital.

R2-2505845 Discussion on remaining issues of on-demand SSB? Qualcomm Incorporated

R2-2505943 Discussion on open issues of on-demand SSB for Scell CMCC

R2-2505989 Remaining issues of on demand SSB SCell operation ZTE Corporation, Sanechips

R2-2506050 Discussion on on-demand SSB SCell operation for NES Huawei, HiSilicon

R2-2506089 On demand SSB handling Nokia, Nokia Shanghai Bell

R2-2506112 Discussion on on-demand SSB for NES Ericsson

R2-2505110 Discussion on on-demand SIB1 Xiaomi

R2-2505157 Discussion on on-demand SIB1 Transsion Holdings

R2-2505169 Consideration on on-demand SIB1 CATT

R2-2505253 On-demand SIB1 Samsung

R2-2505339 Remaining issues of On-demand SIB1 vivo

R2-2505499 Remaining issues on on-demand SIB1 Apple

R2-2505507 Remaining issues on on-demand SIB1 procedure Fujitsu

R2-2505509 Remaining open issues on OD-SIB1 request Sharp

R2-2505527 Discussion on on-demand SIB1 NTT DOCOMO, INC.

R2-2505562 Discussion on remaining issues of on-demand SIB1 operation for NES Huawei, HiSilicon

R2-2505644 Discussion on the remaining open issues for OD-SIB1 ITRI, Acer Incorporated

R2-2505656 On-demand SIB1 request on SUL Sony

R2-2505749 Consideration on on-demand SIB1 OPPO

R2-2505766 Discussion on on-demand SIB1 for NES Ericsson

R2-2505846 Discussion on remaining issues of on-demand SIB1 Qualcomm Incorporated

R2-2505944 Discussion on open issues of OD-SIB1 CMCC

R2-2505978 Remaining issues on OD-SIB1 operation LG Electronics Inc.

R2-2505990 Remaining issues of on demand SIB1 ZTE Corporation, Sanechips

R2-2506008 Remaining essential open issues including whether to support SUL in OD-SIB1 cell. NEC

R2-2506063 Discussion on on-demand SIB1 HONOR

R2-2506090 On demand SIB1 handling Nokia, Nokia Shanghai Bell

R2-2506170 Discussion on Additional Aspects of OD-SIB1 CEWiT

R2-2505099 Remaining issues on common signal and channel transmissions adaptation LG Electronics Inc.

R2-2505170 Adaptation of Common signal channel transmissions CATT

R2-2505255 Adaptation of common signal channel transmissions Samsung

R2-2505275 Discussion on adaptation of common signal channel transmission OPPO

R2-2505316 Remaining open issues on common channel adaptation Xiaomi

R2-2505340 Remaining issues of common signal adaptation vivo

R2-2505500 Remaining issues on common signal transmission adaptation Apple

R2-2505508 Remaining issues on adaptation of common signal/channel Fujitsu

R2-2505528 Discussion on adaptation of common signal and channel NTT DOCOMO, INC.

R2-2505789 Remaining issues for time domain adaptation of common signalling and channels InterDigital

R2-2505847 Discussion on remaining issues for RACH adaptation Qualcomm Incorporated

R2-2505991 Adaptation of common signal/channel transmissions ZTE Corporation, Sanechips

R2-2506051 Discussion on adaptation of common signals/channels transmissions Huawei, HiSilicon

R2-2506064 Discussion on adaptation of common signal/channel transmissions HONOR

R2-2506091 Adaptation of common signals Nokia, Nokia Shanghai Bell

R2-2506095 Adaptation of common signal/channel transmissions for NES Ericsson

R2-2506097 Joint utilization of paging and RA resource adaptations Ericsson, Nokia, Nokia Shanghai Bell, InterDigital, NEC

R2-2506211 Summary report of [AT131][101][NES] (Apple) Apple

R2-2506231 TP for SSB adaptation Huawei

R2-2506215 Text proposal for option 1 Xiaomi

R2-2506218 TP on SIB1 update upon reception of short message Ericsson

4.3 List of RAN WG3 contributions

4.3.1 RAN3#129

R3-255077 (BL CR to 38.300) Introduction of Network Energy Saving Enhancement CATT, Ericsson, Huawei, Samsung, China Telecomm, Rakuten, ZTE, CMCC, Lenovo, Deutsche Telekom, Nokia

R3-255078 (BL CR to 38.470) Introduction of Network Energy Saving Enhancement Samsung, Huawei, NEC, CATT, ZTE, Ericsson

R3-255079 (BL CR to 38.420) Introduction of Network Energy Saving Enhancement ZTE Corporation, Samsung, Lenovo, Huawei, Qualcomm, Ericsson, CATT, Nokia, Rakuten, NEC

R3-255080 Introduction of Network Energy Saving Enhancement Ericsson, Huawei, CMCC, Samsung, Qualcomm, Nokia, ZTE, Lenovo, Deutsche Telekom, NEC, CATT, China Unicom, Jio Platforms, Rakuten

R3-255081 (BL CR to 38.473) Introduction of Network Energy Saving Enhancement Huawei, Ericsson, CMCC, Samsung, ZTE, Nokia, Deutsche Telekom, Lenovo, NEC, Jio Platforms, CATT, Qualcomm

R3-255209 (TP to BLCR TS38.473) Support on-demand SSB NEC

R3-255210 (TP to BLCR TS38.473) Support on-demand SIB1 NEC

R3-255211 TP to BLCR TS38.423 on support on-demand SIB1 NEC

R3-255239 (TP to BLCR for TS 38.473 and TS 38.470) Discussion on on-demand SSB SCell operation Huawei

R3-255240 (TP to BLCR for TS 38.473, TS 38.423 and TS 38.420) Discussion on on-demand SIB1 for UEs in idle or inactive mode Huawei

R3-255241 (TP to BLCR for TS 38.473) Finalizing common signal adaptation Huawei

R3-255247 (TP to BLCRs for TS 38.473) On remaining issues of OD-SSB CATT

R3-255248 (TP to BLCR for TS 38.300) On remaining issues of OD-SIB1 CATT

R3-255249 (TP to BLCR for TS 38.473) Adaptation of paging CATT, ZTE, China Telecom, Samsung

R3-255255 (TP to BL CR 38.401) Stage-2 procedures for OD SIB1 Qualcomm Inc.

R3-255305 (TPs to BL CR for 38.470 and 38.473) Support of on-demand SSB Scell operation ZTE Corporation

R3-255306 (TPs to BL CR for TS38.420, TS38.470 and TS38.473) Support of on-demand SIB1 ZTE Corporation

R3-255307 (TP to BL CR for 38.470) Support of Paging Adaptation ZTE Corporation

R3-255379 (TP to 38.473) On support on-demand SSB SCell operation China Telecom

R3-255435 (TP for BLCR to TS 38.473) On assistance information for OD-SSB over F1 Nokia

R3-255436 (TP for BLCR to TS 38.423, TS 38.473) Stage 3 Proposals for On-Demand SIB1 Nokia

R3-255437 Discussion on adaptation of common signals/channels Nokia

R3-255576 WI Work plan for R19 Network Energy Savings Ericsson

R3-255577 On-demand SSB SCell operation Ericsson

R3-255578 Xn impact of On-demand SIB1 for UEs in idle/inactive mode Ericsson, Deutsche Telekom, China Unicom, Jio Platforms

R3-255579 F1 impact of On-demand SIB1 for UEs in idle/inactive mode Ericsson, Deutsche Telekom, China Unicom, Jio Platforms

R3-255580 Stage 2 Specifications TPs for On-demand SIB1 for UEs in idle/inactive mode Ericsson

R3-255581 Adaptation of common signal/channel transmissions Ericsson

R3-255635 Discussion on on-demand SSB SCell operation in low-carbon green network Samsung

R3-255636 (TP to BLCR for TS 38.470) On-demand SSB SCell operation Samsung

R3-255637 Discussion on on-demand SIB1 in low-carbon green network Samsung

R3-255716 On-Demand SIB1 Availability for Energy Saving in the Handover Scenario ISSDU, NTU

R3-255743 Signalling to support OD-SIB1 Rakuten Mobile, Inc

R3-255770 Summary of offline discussions: Rel-19 Network Energy Saving Ericsson

R3-255806 Xn impact of On-demand SIB1 for UEs in idle/inactive mode Ericsson, Deutsche Telekom, China Unicom, Jio Platforms

R3-255807 (TPs to BL CR 38.401) Support for On-demand SIB1 Qualcomm Incorporated, Huawei, Ericsson, Deutsche Telekom

R3-255808 (TP to BLCR for TS 38.473) Discussion on on-demand SIB1 for Ues in idle or inactive mode Huawei

R3-255809 (TP to BLCR for TS 38.300) On remaining issues of OD-SIB1 CATT

R3-255810 (TP to BL CR for TS38.420) Support of on-demand SIB1 ZTE Corporation

R3-255826 (TP to BLCR for TS 38.470) Support of on-demand SIB1 Samsung

R3-255951 Xn impact of On-demand SIB1 for UEs in idle/inactive mode Ericsson, Deutsche Telekom, China Unicom, Jio Platforms, Huawei, Nokia, NEC, CATT, Qualcomm, ZTE, Rakuten, Verizon

R3-255952 (TP to BLCR for TS 38.473) Discussion on on-demand SIB1 for Ues in idle or inactive mode Huawei, Nokia, ZTE, Ericsson, CATT, NEC, Qualcomm, Deutsche Telekom, Rakuten, Verizon Wireless

R3-255953 (TP to BLCR for TS 38.300) for OD-SIB1 CATT, Qualcomm, Huawei, NEC, Ericsson, Deutsche Telekom, ZTE, Rakuten, Verizon, Samsung

R3-255954 (TP to BL CR for 38.420) Support of on-demand SIB1 ZTE Corporation, Huawei, Samsung, Qualcomm, CATT, Ericsson,

R3-255955 (TP to BLCR for TS 38.470) Support of on-demand SIB1 Samsung, Huawei, ZTE, Qualcomm, Deutsche Telekom, Rakuten, Verizon, CATT, NEC, Ericsson, Nokia

R3-255969 (BL CR to 38.300) Introduction of Network Energy Saving Enhancement CATT, Ericsson, Huawei, Samsung, China Telecomm, Rakuten, ZTE, CMCC, Lenovo, Deutsche Telekom, Nokia

R3-255970 (BL CR to 38.401) Support for On-demand SIB1 Qualcomm Incorporated, Huawei, Ericsson, Deutsche Telekom

R3-255971 (BL CR to 38.420) Introduction of Network Energy Saving Enhancement ZTE Corporation, Samsung, Lenovo, Huawei, Qualcomm, Ericsson, CATT, Nokia, Rakuten, NEC

R3-255972 Introduction of Network Energy Saving Enhancement Ericsson, Huawei, CMCC, Samsung, Qualcomm, Nokia, ZTE, Lenovo, Deutsche Telekom, NEC, CATT, China Unicom, Jio Platforms, Rakuten

R3-255973 (BL CR to 38.470) Introduction of Network Energy Saving Enhancement Samsung, Huawei, NEC, CATT, ZTE, Ericsson

R3-255974 (BL CR to 38.473) Introduction of Network Energy Saving Enhancement Huawei, Ericsson, CMCC, Samsung, ZTE, Nokia, Deutsche Telekom, Lenovo, NEC, Jio Platforms, CATT, Qualcomm

4.4 List of RAN WG4 contributions

4.4.1 RAN4#116

R4-2509034 Additional comments on core requirements for on-demand SSB SCell operation Qualcomm Technologies Ireland

R4-2509035 Further core requirements for adaptation of common signal/channel transmission Qualcomm Technologies Ireland

R4-2509063 Topic summary for [116][220] Netw\_Energy\_NR\_enh\_Part1 Moderator (Ericsson)

R4-2509064 Topic summary for [116][221] Netw\_Energy\_NR\_enh\_Part2 Moderator (Huawei)

R4-2509221 DraftCR on introduction and measurement restriction for L1-SINR measurement MediaTek inc.

R4-2509280 Discussion on RRM requirements for on-demand SSB SCell operation CATT

R4-2509281 Draft CR to TS 38.133 on carrier-specific scaling factor for R19 NES CATT

R4-2509282 Draft CR to TS 38.133 on intra-frequency measurements without measurement gaps for R19 NES CATT

R4-2509283 Discussion on RRM requirements for adaptation of common signalchannel transmission CATT

R4-2509284 Discussion on RRM performance requirements for Rel-19 NES for NR CATT

R4-2509393 RRM performance requirements for Rel-19 NES Qualcomm Technologies Ireland

R4-2509450 Discussion on on-demand SSB SCell operation Apple

R4-2509451 DraftCR of interruptions for OD-SSB transmission Apple

R4-2509452 Discussion on adaptation of common signal/channel transmission Apple

R4-2509453 DraftCR of NR intra-frequency measurement due to SSB adaptation Apple

R4-2509454 Discussion on RRM performance requirements for NES Apple

R4-2509623 RRM requirements for on-demand SCell operation Nokia, Nokia Shanghai Bell

R4-2509624 Draft CR on OD-SSB based SCell activation delay with L3 reporting Nokia, Nokia Shanghai Bell

R4-2509626 Discussion on RRM requirements of on-demand SSB Scell operation for Rel-19 NES LG Electronics Inc.

R4-2509627 Discussion on RRM requirements of SSB adaptation for Rel-19 NES LG Electronics Inc.

R4-2509628 Discussion on RRM performance requirements for Rel-19 NES LG Electronics Inc.

R4-2509630 Draft CR for OD-SSB based SCell Deactivation Delay Requirement for Activated SCell LG Electronics Inc.

R4-2509693 On RRM requirements of on-demand SSB SCell operation OPPO

R4-2509694 Draft CR on OD-SSB related RRM requirements OPPO

R4-2509695 On RRM requirements of SSB adaptation OPPO

R4-2509696 DraftCR on requirements for interruption in paging reception OPPO

R4-2509697 On RRM performance requirements of R19 NES OPPO

R4-2509795 Discussion on OD-SSB requirements Xiaomi

R4-2509796 Discussion on RRM requirements for adaptation of common signal/channel in NES Xiaomi

R4-2509797 "draftCR on Rel19 NES (8.2.2.2.1 Interruptions at SCell addition/release)" Xiaomi

R4-2509798 "draftCR on Rel19 NES (8.2.2.2.2 Interruptions at SCell activation/deactivation)" Xiaomi

R4-2509799 "draftCR on Rel19 NES (8.2.2.2.3 interruption during measurements on deactivated SCC)" Xiaomi

R4-2509800 Discussion on the performance part for NES Xiaomi

R4-2509926 DraftCR: Scheduling availability during UE intra-frequency measurements based on OD-SSB Intel Corporation

R4-2509951 RRM requirements for SSB adaptation Nokia, Nokia Shanghai Bell

R4-2509952 RRM performance requirements for network energy saving Nokia, Nokia Shanghai Bell

R4-2509953 RRM core requirements for On-demand-SIB1 Nokia, Nokia Shanghai Bell

R4-2509954 Draft CR38.133 Introduction of RRM core requirements for OD-SIB1 Nokia, Nokia Shanghai Bell

R4-2510026 Discussion on RRM requirement of OD-SSB for NES enhancement CMCC

R4-2510027 (Netw\_Energy\_NR\_enh-Core) draftCR on Introduce OD-SSB based direct SCell Activation requirement at SCell addition CMCC

R4-2510028 Discussion on RRM requirement of signal adaptation for NES enhancement CMCC

R4-2510029 Discussion on test cases for R19 NES CMCC

R4-2510089 Discussion on On-demand SSB SCell operation for enhancements of NES for NR China Telecom

R4-2510090 Draft CR on OD-SSB based L1-RSRP measurements for Reporting China Telecom

R4-2510091 Discussion on adaptation of common signal channel transmission for enhancements of NES for NR China Telecom

R4-2510092 Discussion on RRM performance requirements of NES for NR China Telecom

R4-2510190 Discussion on remaining issues for on-demand SSB SCell operation in R19 NES vivo

R4-2510191 Discussion on remaining issues for adaptation on common signal in R19 NES vivo

R4-2510196 Draft CR for Scheduling for L1-SINR measurements for Reporting and minimum requirements at transitions vivo

R4-2510596 Discussion on RRM impact for Rel-19 NES OD-SSB Huawei, HiSilicon

R4-2510597 DraftCR on OD-SSB based SCell Activation Delay Requirement for Deactivated PUCCH SCell Huawei, HiSilicon

R4-2510598 Discussion on RRM impact for Rel-19 NES on adaptation Huawei, HiSilicon

R4-2510599 Discussion on performance requiremnets for Rel-19 NES Huawei, HiSilicon

R4-2510680 Discussion on On-demand SSB SCell operation of R19 NES ZTE Corporation, Sanechips

R4-2510681 Discussion on adaptation of common signal and channel of R19 NES ZTE Corporation, Sanechips

R4-2510688 Discussion on Perf part of R19 NES ZTE Corporation, Sanechips

R4-2510721 Draft CR on scheduling restriction of L1-RSRP measurement of R19 NES ZTE Corporation, Sanechips

R4-2510722 Draft CR on transition requirements of L1-RSRP measurement for R19 NES ZTE Corporation, Sanechips

R4-2510913 Discussion on OD-SSB in Rel-19 NES Ericsson

R4-2510914 Discussion on SSB adaptation in Rel-19 NES Ericsson

R4-2510915 Discussion on UE feature list for Rel-19 NES Ericsson

R4-2510916 Discussion on RRM performance requirements for Rel-19 NES Ericsson

R4-2510917 draftCR on OD-SSB based NR intra-frequency measurements Ericsson

R4-2510918 draftCR on SSB adapation for SCell actiation Ericsson

R4-2510919 Big CR for RRM requirements of Enhancements of network energy savings Ericsson, Huawei

R4-2511081 Discussion on RRM requirements for NES OD-SSB Samsung

R4-2511082 Discussion on the requirements for NES SSB adaptation Samsung

R4-2511083 Discussion on performance requirements for NES Samsung

R4-2511084 Draft CR on OD-SSB based SCell Activation Delay Requirement for Deactivated SCell Samsung

R4-2511316 Big CR for RRM requirements of Enhancements of network energy savings - part2 Ericsson, Huawei