3GPP TSG-RAN WG2 Meeting #116bis electronic [R2-2xxxxxx](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2xxxxxx.zip)

Online, January, 2022

Source: Session Chair (InterDigital)

Title: Report for Rel-17 Small data, URLLC/IIoT and RACH partitioning

**Email discussions:**

* [AT116bis-e][500] Organizational Diana – URLLC/IIoT, Small data]

Scope:

* + - Share plans for the meetings and list of ongoing email discussions for the sessions related to URLLC/IIoT, Small data and NR-U, 2-step RACH, and power saving
		- Share meetings notes and agreements for review and endorsement
* [AT116bis-e][501][Sdata] UP open issues (LG)

Remaining UP open issues

Deadline: Proposals by rapporteur by Friday (intermediary deadlines for comments to be set by rapporteur)

* [AT116bis-e][502][Sdata] CP open issues (InterDigital)

Remaining CP open issues

Deadline: Proposals by rapporteur by Friday (intermediary deadlines for comments to be set by rapporteur)

* [AT116bis-e][503][IIoT] Tsynch open issues (ZTE)

 Remaining CP open issues

Deadline: Proposals by rapporteur by Friday (intermediary deadlines for comments to be set by rapporteur)

* [AT116bis-e][504][IIoT] UCE open issues (Vivo)

 Remaining CP open issues

Deadline: Proposals by rapporteur by Friday (intermediary deadlines for comments to be set by rapporteur)

## 8.5 NR IIoT URLLC

(NR\_IIOT\_URLLC\_enh-Core; leading WG: RAN2; REL-17; WID: RP-210854)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

Email max expectation: threads

### 8.5.1 Organizational

Including email discussions [Post116-e][511][IIoT] MAC running CR update (Samsung) and [Post116-e][512][IIoT] Stage-2 running CR update (Nokia)

[R2-2200080](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200080.zip) LS on propagation delay compensation (R1-2112834; contact: Huawei) RAN1 LS in Rel-17 NR\_IIOT\_URLLC\_enh To:RAN2, RAN4

[R2-2200024](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200024.zip) MAC Running CR for Rel-17 IIoT/URLLC Samsung draftCR Rel-17 38.321 16.7.0 B NR\_IIOT\_URLLC\_enh

[R2-2200052](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200052.zip) Stage-2 Running CR for Rel-17 IIoT/URLLC Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0392 - B NR\_IIOT\_URLLC\_enh [R2-2110441](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2110441.zip)

[R2-2200951](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200951.zip) RRC running CR for IIoT Ericsson draftCR Rel-16 38.331 16.7.0 NR\_IIOT\_URLLC\_enh

[R2-2200992](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200992.zip) UE capabilities for Rel-17 IIoT / URLLC Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201131](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201131.zip) RAN1 feature impact on MAC in Rel-17 IIoT/URLLC Apple discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core Late

[R2-2201132](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201132.zip) Text proposals to MAC running CR for Rel-17 IIoT/URLLC Apple discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core Late

[R2-2201373](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201373.zip) MAC impact of RAN1 Rel-17 HARQ deferral Xiaomi Communications discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

### 8.5.2 Enhancements for support of time synchronization

RAN1 progress if any should be taken into account. \

[R2-2200060](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200060.zip) RE: LS on Time Synchronization IEEE 1588 WG LS in To:RAN, SA Cc:RAN2

[R2-2200182](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200182.zip) Signalling for Support of Propagation Delay Compensation Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh

[R2-2200320](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200320.zip) RTT-based PDC and TA-based PDC CATT discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200477](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200477.zip) Discussion about propagation delay compensation for accurate time synchronization Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200611](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200611.zip) Discussion on propagation delay compensation for TSN NTT DOCOMO INC. discussion Rel-17

[R2-2200678](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200678.zip) Discussion on RTT-based PDC ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2200761](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200761.zip) Signaling procedure of RTT based propagation delay compensation Lenovo, Motorola Mobility discussion Rel-17

[R2-2200872](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200872.zip) Discussion on RTT-based PDC Enhancement CMCC discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200926](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200926.zip) Remaining issues on time synchronization enhancement OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200952](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200952.zip) Propagation delay compensation enhancements Ericsson discussion

[R2-2200991](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200991.zip) Remaining issues of timing synchronization Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201016](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201016.zip) Propagation Delay Compensation for TSN Qualcomm Incorporated discussion Rel-17

[R2-2201263](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201263.zip) Discussion on propagation delay compensation vivo discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201367](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201367.zip) Issues on PDC Samsung discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

### 8.5.3 Uplink enhancements for URLLC in unlicensed controlled environments

Remaining open issues.

[R2-2200183](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200183.zip) Remaining Issues on Configured Grant for URLLC in Unlicensed Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh

[R2-2200321](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200321.zip) Leftovers of UCE CATT discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200478](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200478.zip) Remaining issues about uplink enhancements for URLLC in UCE Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200927](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200927.zip) Remaining issues on URLLC over NRU OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200953](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200953.zip) Remaining issues in UL CG enhancements Ericsson discussion

[R2-2201018](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201018.zip) CG Harmonization for Unlicensed Controlled Environment Qualcomm Incorporated discussion Rel-17

[R2-2201226](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201226.zip) Further Consideration on the Intra-UE multiplexing in UCE ZTE Corporation,Sanechips discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201264](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201264.zip) Remaining Issues for UCE vivo discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201285](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201285.zip) Remaining issues for IIoT in UCE III discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2201368](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201368.zip) Remaining Issues on CG Enhancement and Intra-UE Prioritization Samsung discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201374](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201374.zip) UE processing time restriction on the retransmission grant selection Xiaomi Communications discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201460](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201460.zip) Remaining issues for UCE MediaTek Inc. discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core [R2-2110754](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2110754.zip)

### 8.5.4 RAN enhancements based on new QoS

Contributions should aim to bring new issues not covered in email discussions already and should be clearly separated in the document from issues covered in the email discussion.

Including email discussion [Post116-e][513][IIoT] QoS survival time (Apple)

RAN enhancements based on new QoS related parameters taken into account SA2 progress

[R2-2200003](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200003.zip) Report of [Post116-e][513][IIoT] QoS Survival Time (Apple) Apple discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200184](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200184.zip) Some open issues for Survival Time Support Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh

[R2-2200309](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200309.zip) Analysis on HARQ-NACK solution Fujitsu discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core [R2-2109710](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2109710.zip)

[R2-2200310](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200310.zip) Survival Time Mode and Measurement Gap Fujitsu discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200311](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200311.zip) L1/L2 configuration adaptation Fujitsu discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core [R2-2109709](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2109709.zip)

[R2-2200322](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200322.zip) HARQ NACK solution: leftover issues and TP CATT discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200369](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200369.zip) Additional aspects on resource in Survival Time III discussion Rel-17 NR\_IIOT\_URLLC\_enh

[R2-2200479](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200479.zip) Discussion about UE behaviors for Survival Time state operation Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200704](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200704.zip) N and combined Tx-side timer for IIoT QoS ZTE, Sanechips, China Southern Power Grid Co., Ltd, TCL Communication Ltd., vivo discussion NR\_IIOT\_URLLC\_enh-Core [R2-2110108](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2110108.zip)

[R2-2200708](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200708.zip) Remaining issues on the support of survival time Lenovo, Motorola Mobility discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200873](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200873.zip) Remaining Issues on HARQ-NACK Solution CMCC discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200928](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200928.zip) Remaining issues on survival time OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200954](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200954.zip) Remaining details on survival time enhancement Ericsson discussion

[R2-2200990](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200990.zip) Survival time handling Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201019](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201019.zip) RAN Enhancement to support Survival Time Qualcomm Incorporated discussion Rel-17

[R2-2201133](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201133.zip) Remaining QoS solution aspects Apple discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201173](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201173.zip) Remaining issues on the support of survival time InterDigital discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201265](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201265.zip) Discussion on HARQ NACK solution vivo discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201375](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201375.zip) Remaining issues of survival time requirements Xiaomi Communications discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201520](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201520.zip) CG status and PDCP Duplication status LG Electronics discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2201521](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201521.zip) Remaining issues on QoS support LG Electronics discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2201522](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201522.zip) Selective RLC activation for PDCP duplication in ST state LG Electronics discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2201530](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201530.zip) Finalising Survival Time related enhancements Samsung Electronics GmbH discussion

[R2-2201622](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201622.zip) Considerations on UE Survival Time support Sequans Communications discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

## 8.6 Small Data enhancements

(NR\_SmallData\_INACTIVE-Core; leading WG: RAN2; REL-17; WID: RP-212594)

Time budget: 1.5 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 2 threads

### 8.6.1 Organizational

In coming LSs, rapporteur input for email discussions summaires etc (tdocs in this don’t count towards tdoc limit).

Inputs expected for 38.321 CR (Huawei), 38.331 CR (ZTE), 38.300 CR (Nokia)

Including [Post116-e][506][SDT] RRC running CR update (ZTE), [Post116-e][507][SDT] MAC running CR update (Huawei), and [Post116-e][508][SDT] Stage-2 running CR update (Nokia)

[R2-2200025](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200025.zip) Introduction of SDT Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0357 - B NR\_SmallData\_INACTIVE-Core [R2-2110808](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2110808.zip)

[R2-2200032](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200032.zip) Summary of [Post116-e][507][SDT] MAC running CR update (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200031](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200031.zip) Running MAC CR for small data Huawei, HiSilicon draftCR Rel-17 38.321 16.7.0 B NR\_SmallData\_INACTIVE-Core

[R2-2200050](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200050.zip) RRC Running CR for SDT ZTE Corporation (rapporteur) discussion Rel-17 38.331 NR\_SmallData\_INACTIVE-Core

[R2-2201027](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201027.zip) Updated RRC running CR for SDT ZTE corporation (rapporteur) draftCR Rel-17 38.331 16.7.0 B NR\_SmallData\_INACTIVE

[R2-2200073](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200073.zip) Reply LS on the physical layer aspects of small data transmission (R1-2112782; contact: ZTE) RAN1 LS in Rel-17 NR\_SmallData\_INACTIVE-Core To:RAN2

[R2-2200502](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200502.zip) UE capabilities for Rel-17 SDT WI Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200503](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200503.zip) UE capabilities for Rel-17 SDT WI Intel Corporation draftCR Rel-17 38.306 16.7.0 NR\_SmallData\_INACTIVE-Core

[R2-2200504](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200504.zip) UE capabilities for Rel-17 SDT WI Intel Corporation draftCR Rel-17 38.331 16.7.0 NR\_SmallData\_INACTIVE-Core

[R2-2201357](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201357.zip) Discussion on MAC running CR LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

### 8.6.2 User plane common aspects

Overall user plane procedure for SDT (including details of ROHC continuity, BSR/PHR configuration, LCH restrictions, handling of TAT and CG-TAT) )

LG is expected to submit a paper on the proposals not treated from last meeting. Companies are discouraged from submitting documents on those issues again unless their opinon has changed. Focus on new critical open issues

[R2-2201321](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201321.zip) Remaining UP issues in SDT LG Electronics Inc. discussion Rel-17 NR\_SmallData\_INACTIVE-Core

Proposal 1: At the time of SDT data volume calculation, there should be no buffered packets in PDCP/RLC entities that will not be transmitted during SDT procedure.

Proposal 2: PDCP PDUs are discarded (by PDCP suspend) upon reception of RRCRelease message including suspendConfig. PDCP SDUs already stored are considered in SDT data volume calculation. No change to current specification is needed.

Proposal 6: Do not consider CCCH message for SDT data volume calculation.

Proposal 7: Start/restart TAT-SDT when contention resolution is successful if RAR TAC is received during RA procedure (either legacy RA procedure or RA-SDT procedure).

Proposal 8: Start/restart TAT-SDT when TAC MAC CE is received.

[R2-2200203](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200203.zip) User Plane Aspects of RACH and CG based SDT Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200336](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200336.zip) Consideration on UP remaining issues CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2200435](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200435.zip) Remaining issues of user plane common aspects Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200573](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200573.zip) Remaining user plane aspects of SDT NEC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200643](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200643.zip) Discussion on user plane issues of SDT OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200726](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200726.zip) Remaining issues on UP aspects of SDT Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core [R2-2110752](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2110752.zip)

[R2-2200863](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200863.zip) Data volume calculation for SDT CMCC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200985](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200985.zip) Common aspects for SDT Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201024](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201024.zip) Remaining UP issues for SDT InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201028](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201028.zip) User plane common aspects of SDT ZTE corporation, Sanechips discussion

[R2-2201124](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201124.zip) User plane aspects of SDT Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201439](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201439.zip) Remaining Issues on Subsequent UL transmission during SDT vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201570](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201570.zip) Consideration on UP remaining issues CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201586](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201586.zip) UP aspects for SDT Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

### 8.6.3 Control plane common aspects

Including output of [Post116-e][510][SDT] CCCH and DCCH (Nokia). Only co-sourced CRs and papers are encouraged for this topic.

Other critical CP open issues

[R2-2200026](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200026.zip) Report of [Post116-e][510][SDT] CCCH and DCCH (Nokia) Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

*Proposal 1: Send an LS to CT1 to confirm whether NAS provides resume cause upon non-SDT data arrival and in case it does, whether it shall be included in the RRC message for non-SDT data indication for DCCH based solution.*

*Proposal 2: The UE shall not perform periodic RNA update during SDT procedure.*

*Proposal 3: NW can transmit RRCReject message at any point in time during the SDT procedure, including the case the non-SDT data indication for DCCH based solution has been sent by the UE.*

*Proposal 4: Send an LS to SA3 and ask if they see any issue in UE autonomous horizontal key derivation when switching from SDT procedure to RRC resume procedure for non-SDT data indication with CCCH based solution.*

*Proposal 5: Furthermore, ask if SA3 sees any issue in using the same KgNB derived for the SDT procedure for resumeMAC-I generation for the RRCResumeRequest used for non-SDT data indication with CCCH based solution.*

*Proposal 6: Ask in the LS to SA3 the preference from SA3 about the key and/or input parameters used as input for the resumeMAC-I generation for the RRCResumeRequest used for non-SDT data indication.*

*Proposal 7: The key/solution used for the security for non-SDT data indication with CCCH based solution will be the same regardless of whether the RA procedure for the SDT procedure has been completed or not.*

*Proposal 8: No explicit indication from the UE is specified to indicate to the NW the RRCResumeRequest is used for non-SDT data indication with CCCH based solution, ie., it is left to NW implementation to identify this.*

*Proposal 9: Send an LS to RAN3 about the CCCH based solution details for them to work on the required RAN3 details.*

[R2-2201674](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201674.zip) Summary of Rel-17 SDT contributions on Control Plane Common Aspects InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200201](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200201.zip) Paging Monitoring during SDT procedure Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200202](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200202.zip) RNA update and SI request handling during SDT procedure Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200312](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200312.zip) Handling of SDTF detection timer Fujitsu discussion Rel-17 NR\_SmallData\_INACTIVE-Core [R2-2109712](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2109712.zip)

[R2-2200313](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200313.zip) RAN paging reception and response during SDT Fujitsu discussion Rel-17 NR\_SmallData\_INACTIVE-Core [R2-2109713](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2109713.zip)

[R2-2200337](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200337.zip) Consideration on some CP issues CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2200505](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200505.zip) Control Plane leftover issues on SDT procedure Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200574](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200574.zip) Remaining control plane aspects of SDT NEC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200644](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200644.zip) Discussion on control plane issues of SDT OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200663](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200663.zip) Emergency call in the middle of SDT operation InterDigital, Europe, Ltd. Rakuten Mobile Inc. discussion Rel-17

[R2-2200696](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200696.zip) Handling of SDT failure timer InterDigital, Europe, Ltd. discussion Rel-17

[R2-2200727](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200727.zip) Remaining issues on CP aspects of SDT Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core [R2-2110753](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2110753.zip)

[R2-2200811](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200811.zip) Control plane common aspects for SDT Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200919](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200919.zip) Subsequent SDT failure detection timer Sony discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200986](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200986.zip) CP aspects for SDT Ericsson discussion

[R2-2201029](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201029.zip) CP open issues for SDT ZTE corporation, Sanechips discussion

[R2-2201125](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201125.zip) Control plane aspects of SDT Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201126](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201126.zip) Power Saving for SDT Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201174](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201174.zip) DCCH-based indication of non-SDT data arrival Intel Corporation, ZTE Corporation, Sanechips, Samsung, Xiaomi, MediaTek, Radisys and Reliance JIO, Qualcomm, CMCC, OPPO, Lenovo, Sony, Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201217](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201217.zip) RNA Update during SDT Sharp discussion

[R2-2201358](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201358.zip) Remaining issues on Control Plane Aspects for SDT LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

[R2-2201376](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201376.zip) Clarification on the area configured for ROHC continuity Xiaomi Communications discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201377](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201377.zip) Paging reception during SDT Xiaomi Communications discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201378](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201378.zip) RACH failure in subsequent data transmission phase Xiaomi Communications discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201440](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201440.zip) Remaining Issues on RRC-Controlled SDT procedure vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core [R2-2109439](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2109439.zip)

[R2-2201441](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201441.zip) Further Consideration on the Handling of non-SDT Data Arrival vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201495](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201495.zip) SDT control plane aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE

[R2-2201496](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201496.zip) RRC procedure for SDT Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE

[R2-2201535](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201535.zip) Remaining issues for non-SDT data arrival China Telecommunications discussion

[R2-2201571](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201571.zip) Consideration on some CP issues CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

### 8.6.4 Aspects specific to RACH based schemes

Contribution on this topic should be submitted on the RACH partitioning/configuration AI, unless something specific to Small data needs to be discussed.

[R2-2200338](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200338.zip) Anchor relocation during SDT CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2200506](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200506.zip) RACH leftover issues on RA-SDT procedure Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200638](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200638.zip) Discussion on RACH-based SDT Spreadtrum Communications discussion Rel-17

[R2-2200645](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200645.zip) Discussion on swiching from RA-SDT to non-SDT OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200729](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200729.zip) Remaining issues on RACH based SDT Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core [R2-2110760](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2110760.zip)

[R2-2200738](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200738.zip) Discussion on triggering legacy RA for RA-SDT ASUSTeK discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200779](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200779.zip) Analysis on open issue of RA based SDT Lenovo, Motorola Mobility discussion Rel-17

[R2-2200983](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200983.zip) RACH based small data transmission Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201355](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201355.zip) Switching cases of SDT and non-SDT LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

[R2-2201356](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201356.zip) Discussion on Carrier selection for SDT LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

[R2-2201572](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201572.zip) Anchor relocation during SDT CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

### 8.6.5 Aspects specific to CG based schemes

Including outcome of [Post116-e][509][SDT] CG open issues (Huawei)

Contributions should aim to bring new issues not covered in email discussions already and should be clearly separated in the document from issues covered in the email discussion.

[R2-2200033](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200033.zip) Summary of [Post116-e][509][SDT] CG open issues (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

=> Revised in [R2-2201657](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201657.zip)

[R2-2201657](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201657.zip) Summary of [Post116-e][509][SDT] CG open issues (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core [R2-2200033](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200033.zip)

** Potentially easy to agree**

*Proposal1: RSRP-based TA validation is only applicable for initial CG-SDT and not needed for retransmission of the initial CG-SDT. (15/20)*

*Proposal3: No additional NTA is defined for CG-SDT procedure. (18/20)*

*Proposal5: Upon expiry of CG-SDT-TAT , UE should (a) clears all SDT configured grant, (b) flushes HARQ buffer and (c) continue to maintain NTA. (15/18)*

*Proposal6: Stick to the previous agreement: subsequent new transmission on CG-SDT is supported. Support implicit ACK by dynamic scheduling of uplink new transmission for the same HARQ process. (16/20)*

*Proposal8: Subsequent downlink transmission can serve as an implicit acknowledgement for initial CG-SDT but not for subsequent CG-SDT. (16/20)*

*Proposal9: ConfiguredGrantTimer is reused for CG-SDT for prohibiting the HARQ process for new uplink transmissions. (17/19)*

*Proposal11: Do not perform SSB reselection for retransmission on CG-SDT (16/20)*

*Proposal13: CS-RNTI for CG-SDT is provided to the UE in RRCRelease message. (20/20)*

*Proposal14: UE does not perform UL carrier reselection for subsequent CG-SDT transmission over CG-SDT resources (19/20)*

*Proposal15: Once a UL carrier is selected for a specific CG-SDT transmission, the UE should perform autonomous retransmission on the same uplink carrier. (19/20)*

*Proposal16: There is no restriction on the candidate values of CG period (20/20)*

*Proposal17: Do not support multiple CG occasions per CG period. (14/18)*

* Need further R2 discussion*

*Proposal2: RAN2 should further discuss if (a) the thresholds for SSB selection and SSB subset selection for TA-validation are different and (b) the highest beam measurement is below the configured threshold, whether the beam with the highest beam measurement value is used for TA validation*

*Proposal4: Keep the two timers at successful RACH completion for RACH during CG-SDT: (a) re-start the CG-SDT-TAT; and (b) not to stop the legacy TAT. (12/20)*

*Proposal7: Support retransmission on CG-SDT resource for subsequent CG-SDT transmission. (11/18)*

*Proposal 10: CG-SDT timer should be stopped when PDCCH addressed to C-RNTI and CS-RNTI is received (12/19)*

*Proposal12: UE does not use RA-SDT resources when there are no SSB available for subsequent new transmission. (12/20)*

* Continue to discuss in the future*

*Proposal18: RAN2 continues the discussion on CG-SDT on the following aspects*

*- Open issues for supporting subsequent transmission on CG*

*- Whether the UE should maintin uplink timing alignment in RRC\_INACTIVE for CG-SDT*

*- Whether UAC should be applicable when CG-SDT is used for the DRB configured for SDT*

*- Wheter CG-SDT assistance information similar to PUR is needed for CG-SDT*

*- Whether power ramping is needed for autonomous retransmission*

[R2-2200204](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200204.zip) CG-SDT-TAT expiry handing during the CG-SDT procedure Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200339](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200339.zip) Consideration on CG-SDT CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2200436](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200436.zip) Remaining issues of CG-SDT Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200437](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200437.zip) Further discussion on TA issues for CG-SDT Huawei, HiSilicon, ZTE corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200507](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200507.zip) CG-SDT leftover issues Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200646](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200646.zip) Discussion on open issues of CG-SDT OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200717](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200717.zip) Remaining issues on CG-based Small data transmission Lenovo, Motorola Mobility discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200734](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200734.zip) Remaining issues on CG based SDT Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200739](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200739.zip) Discussion on CS-RNTI configuration for CG-SDT ASUSTeK discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200984](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200984.zip) Details of CG based SDT Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201023](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201023.zip) Remaining issues for CG-based SDT InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201030](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201030.zip) Aspects specific to CG-SDT ZTE corporation, Sanechips discussion

[R2-2201338](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201338.zip) Aspects specific to CG-SDT Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201379](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201379.zip) Clarification on the RSRP-based TA validation Xiaomi Communications discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201442](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201442.zip) Supporting Small Data Transmission via CG PUSCH vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2201537](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201537.zip) Remaining issues on CG based SDT China Telecommunications discussion

[R2-2201573](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201573.zip) Consideration on CG-SDT CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

## 8.18 RACH indication and partitioning

Time budget: Equivalent to 0.5-1 TU

Tdoc Limitation: 2 tdocs

Expected to cover WIs SDT, CovEnh, RedCap, RAN slicing. RA specific aspects from the different WI should be covered in this AI given the RA experts are all there.

### 8.18.1 Common signalling framework

Including output of [Post116-e][514][RACH partitioning] Signaling design (Ericsson) and any other input for RRC signalling (focus company tdocs on issues that are not addressed in [514] email)

[R2-2200020](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200020.zip) [Post116-e][514][RACH partitioning] Signaling design (Ericsson) Email discussion Rapporteur (Ericsson) discussion Rel-17 NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core

The reason from this construction in the draft CR, i.e. that this field is present in both IEs, is to implement the agreement from earlier which allows a separate time-frequency resource (i.e. RACH configuration) dedicated to a feature combination but also a subset of the preambles within a time-frequency resource (i.e. a subset of the preambles within a RACH configuration). More specifically:

1) the indication in RACH-ConfigCommon allows to associate an additional whole RACH resource to a specific feature combination. This feature combination may then be considered the default one associated to all ROs of an additional RACH configuration,

2) the indication in FeatureCombinationPreambles, is to allow that a subset of a RACH configuration is associated to a RA partition. Optionality in those fields would result in a signaling structure similar to removing the indication from RACH-ConfigCommon.

***Proposal 1: Discuss if signaling should allow for a flexibility as clarified above acc. to agreements.***

In some company comments it is clarified what cases shall be possible in the signaling structure. For example, the following cases are mentioned:

- RA resource in R17 RA partition shares the RO with legacy RA resource. Or in other words, some of the legacy RA resources are associated to a Rel-17 RA partition

- Different types of RA resource within one RA partition share the RO with each other. Or in other words, one RO is shared between different RA partitions.

- etc.

In the current draft, the intention is that at least those mentioned are covered.

***Proposal 2: Confirm the cases to be supported and that the current signaling structure includes the above cases.***

In the current draft running CR, mainly a signaling structure framework for the RA Partitioning has been attempted. It can be beneficial to discuss and decide how WI/Feature specific parameters due to agreed signaling options are captured; if the RA Partitioning CR is updated based on WI specific details as a single merged version, or if each WI impacted by RA partitioning (RedCap, SDT, Coverage enhancements, and Slicing) should each capture their parts of RA partitioning in their specific running RRC CR based on this common CR.

The rapporteur suggests, that RAN2 should submit a single RRC CR for RA partitioning that captures all RA partition related procedures/signalling which has the WI-code for RedCap, SDT, Coverage enhancements, and Slicing on the cover page. The RRC CRs for RedCap, SDT, Coverage enhancements, and Slicing should then not have any overlap with the RA partitioning CRs.

**Proposal 3: RAN2 submits one RRC CR to plenary that captures the RA partitioning feature that covers all common aspects for RA partitioning. The RRC CRs for RedCap, SDT, Coverage enhancements, and Slicing should not have any overlap with this common RRC CR.**

In some company comment, it was discussed in which order the preambles of different RA partitions should be determined by the UE. For example, in case two RA partitions share a certain RO (e.g. one RedCap partition and SDT partition): how is it determined which preambles belong to RedCap and which preambles belong to SDT? In any case, the order should not result in that a legacy UE uses preambles associated with a Rel-17 feature.

The rapporteur sees two approaches:

A) for each partition only the number of preables per feature are indicated (e.g. 7 preambles for RedCap and 4 preambles for SDT) the order must be clear either from signalling, or from a descriptive tex.

B) the RRC signaling indicate explicitly the preamble numbers that belong to partition (e.g. the RedCap partition uses preambles 13-19, and SDT uses 20-23), resulting in no need to indicate the order explicitly.

**Proposal 4: Decide if only the number of preambles belonging a partition is signalled (i.e. X preambles), or if the exact preamble-numbers belonging a partition is signalled (i.e. preambles X-Y).**

[R2-2200019](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200019.zip) Running CR to 38.331 on RA Partitioning Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core

[R2-2200206](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200206.zip) Preamble and RACH resource configuration Samsung Electronics Co., Ltd discussion Rel-17 NR\_cov\_enh-Core, NR\_SmallData\_INACTIVE-Core, NR\_slice-Core

[R2-2200261](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200261.zip) RRC aspects of RACH partition OPPO discussion Rel-17

[R2-2200419](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200419.zip) Discussion on signaling design for RACH partitioning CATT discussion Rel-17 NR\_cov\_enh-Core, NR\_slice-Core, NR\_SmallData\_INACTIVE-Core, NR\_redcap-Core

[R2-2200456](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200456.zip) Signalling design of RACH partitioning for multiple feature combinations Intel Corporation discussion Rel-17 NR\_cov\_enh-Core, NR\_redcap-Core, NR\_UE\_pow\_sav\_enh-Core, NR\_slice-Core

[R2-2200701](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200701.zip) Consideration on the common signalling framework for RACH partitioning Beijing Xiaomi Software Tech discussion

[R2-2200812](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200812.zip) Common signalling for RACH indication and partitioning Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_slice-Core, NR\_redcap-Core, NR\_cov\_enh-Core

[R2-2201049](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201049.zip) Features Combination signalling Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core

[R2-2201127](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201127.zip) Signaling aspects of RACH partitioning Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core

[R2-2201128](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201128.zip) MAC aspects of RACH partitioning Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core

[R2-2201473](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201473.zip) Discussion on signalling aspects on common RACH framework LG Electronics Inc. discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_slice-Core, NR\_redcap-Core, NR\_cov\_enh-Core

[R2-2201553](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201553.zip) RACH partitioning for Rel-17 features Ericsson other Rel-17

[R2-2201597](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201597.zip) Discussion on RACH Partitioning in RA Configuration Aspect vivo discussion Rel-17 [R2-2109442](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2109442.zip) Late

### 8.18.2 Common aspects of RACH procedure

Including output of [Post116-e][515][RACH partitioning] MAC Procedure aspects (ZTE) and any other inputs not treated in 515, including RACH procedure and input for handling of the common MAC aspects including handling of RACH initiation, retransmissions etc

[R2-2200049](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200049.zip) [Post116-e][515][RACH partitioning] MAC Procedure aspects (ZTE) email discussion Rapporteur (ZTE Corporation) discussion Revised

Observation 1: Significant majority of companies prefer option 1. With this approach, CE/non-CE selection RSRP threshold can be configured per UE and UE selects CE/non-CE partition like other RACH partitions.

Proposal 1: CE will also be considered as part of the feature combination for each RACH partition and the use of CE will be determined before the RACH partition selection is performed

Observation 2: In general companies agree with the principles highlighted above for each feature. Some details need further discussion (TBD).

Proposal 2: General understanding for RACH partition usage is per below: Some details are still TBD

For each RACH partition configured, the RACH partition will be considered as available for a triggered RACH procedure in case all the following conditions are satisfied:

a) if REDCAP indication is configured for the partition, then the RACH partition is only applicable to the RACH procedure triggered for REDCAP UE where Msg1 identification is required. Otherwise, if REDCAP indication is not configured, then the RACH partition is applicable to non-REDCAP UE and REDCAP UE where Msg1 identification is not required. (FFS how to determine whether Msg1 identification is required or not)

b) if slice info is configured for the partition,then the RACH partition is only applicable to the RACH procedure triggered for the slice. Otherwise, if the slice info is not configured, then the RACH partition is applicable to all slices.

c) if SDT indication is configured, then the RACH partition is only applicable to the RACH procedure triggered for SDT. Otherwise, if SDT indication is not configured, then the RACH partition is applicable to the RACH procedure not triggered for SDT.

if CE indication is configured, then the RACH partition is only applicable to the RACH procedure where CE is required. Otherwise, if CE indication is not configured, then the RACH partition is applicable to the RACH procedure where CE is not required. (if CE is considered as part of feature combination)

Observation 3: It seems majority of companies prefer option 2/3. So, option 1 may be ruled out for now and we can discuss further details.

Proposal 3: If only a subset of features have a matching RACH partition, and the triggered RACH doesn’t fit with any of the configured RACH partitions then the UE behaviour will be specified. Details are TBD.

Observation 4: Majority of companies seem to prefer a static set of rules. However, there seems to be no significant majority one way or the other and no consensus. So, this needs further discussion.

Proposal 4: If we agree to specify a set of priorty rules, these rules are selected between following options:

Option a: Priority rules are static and will be defined in the specs (e.g. the available RACH partition with slice info will be prioritized etc)

Option b: Priority rules are configurable (e.g. can be configured in SI)

Observation 5: companies seem to think that we need to first decide how to determine the relative priorities and then we can decide how to specify this. For now, no proposal is made for this.

Observation 6: All companies agree with this proposal below:

Proposal 6: Once the RACH resource partition for a given feature set combination is determined, RACH procedure related variables in sections 5.1.1 and 5.1.1a will be initialized based on the values signalled within the selected RACH partition

Observation 7: In general companies seem to agree with the following proposal

Proposal 7: In general, RACH parameters (e.g. power ramping step, max RACH transmissions etc) are configured per RACH partition rather than per feature within the partition.

Observation 8: No common view on this issue. Some companies think that BWP and carrier selection should happen before RACH partition is selected. But others think that this can happen after RACH selection. Companies also think that for some features some exceptions may apply (e.g. SDT). Overall it seems this aspect needs further discussion.

Obsrevation9 : clear majority view for the following proposal

Proposal 9: RA-type selection can happen like today (i.e. after the carrier and BWP selection) based on the RACH parameters signalled in the selected RACH partition

Observation 10: Opinions are mainly split between option 1 and and option 3. Some companies think that option 3 is anyway needed at least for some features. But others seem to have different view on this. So, this seems to also need some further discussion.

Proposal 10: To solve the RNTI collision issue, selection between following options is proposed:

Option 1: Do nothing (i.e. leave to network implementation)

Option 3: the network should be able to (optionally) configure a specific search space for RAR/MSGB monitoring per RACH resource partition

[R2-2200193](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200193.zip) Selection and fallback between RACH partitions Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core

[R2-2200207](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200207.zip) RA Procedure Aspects Samsung Electronics Co., Ltd discussion Rel-17 NR\_cov\_enh-Core, NR\_SmallData\_INACTIVE-Core, NR\_slice-Core

[R2-2200262](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200262.zip) MAC aspects of RACH partition OPPO discussion Rel-17

[R2-2200420](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200420.zip) Discussion on MAC procedure for RACH partitioning CATT discussion Rel-17 NR\_cov\_enh-Core, NR\_slice-Core, NR\_SmallData\_INACTIVE-Core, NR\_redcap-Core

[R2-2200457](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200457.zip) RACH resource/configuration selection and fallback mechanism Intel Corporation discussion Rel-17 NR\_cov\_enh-Core, NR\_redcap-Core, NR\_UE\_pow\_sav\_enh-Core, NR\_slice-Core

[R2-2200617](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200617.zip) Remaining issues for MAC procedure in RACH partition NEC discussion Rel-17 NR\_redcap-Core, NR\_cov\_enh-Core, NR\_SmallData\_INACTIVE-Core, NR\_slice-Core

[R2-2200703](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200703.zip) Considerations on the common aspects of RACH procedure Beijing Xiaomi Software Tech discussion

[R2-2200813](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200813.zip) MAC aspects for RACH partitioning Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_slice-Core, NR\_redcap-Core, NR\_cov\_enh-Core

[R2-2200848](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200848.zip) Discussion on RACH indication and partitioning CMCC discussion Rel-17

[R2-2200917](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200917.zip) RNTI collision issue for different features in NR Sony discussion Rel-17 NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core

[R2-2201025](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201025.zip) RACH indication and partitioning InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core

[R2-2201026](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201026.zip) Updated - [Post116-e][515][RACH partitioning] MAC Procedure aspects (ZTE) email discussion Rapporteur (ZTE Corporation) discussion [R2-2200049](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2200049.zip)

[R2-2201031](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201031.zip) MAC procedure aspects of RACH partitioning ZTE corporation, Sanechips discussion

[R2-2201474](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201474.zip) Further discussion on common RA procedure LG Electronics Inc. discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_slice-Core, NR\_redcap-Core, NR\_cov\_enh-Core

[R2-2201554](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201554.zip) RNTI collision problem for Rel-17 features Ericsson other Rel-17

[R2-2201589](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201589.zip) Selection of RACH partition Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201628](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2201628.zip) Discussion on RACH Partitioning in RA Procedure Aspect vivo discussion Rel-17 [R2-2110927](file:///C%3A%5CUsers%5Cpanidx%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5C3GPP%20RAN%5CTSGR2_116bis-e%5CDocs%5CR2-2110927.zip) Late