**3GPP TSG-RAN WG2 Meeting #112-e R2-20xxxxx**

**Online, 2-13 November 2020**

**Source: Session Chair (MediaTek)**

**AI: 10.5**

**Title: Report from session on positioning and sidelink relay**

# Status of At-Meeting Email Discussions

This subclause is not an Agenda Item. It contains a running summary of the email discussions assigned to take place during the meeting weeks. This section will be moved to an appendix in the final version of the report.

* [AT112-e][600][POS][Relay] Organisational Nathan – Positioning/Relay (MediaTek)

 Scope: Organisational discussions and announcements, as needed throughout the meeting weeks

 Intended outcome: Well-informed participants

 Deadline: Friday 2020-11-13 1000 UTC

* [AT112-e][601][Relay] Status update to SA2 (OPPO)

 Scope: Generate a summary of RAN2 status on relaying for SA2

* Report status of both L2 and L3 relaying designs as well as architecture-independent aspects (including issues in R2-2008760), in order to coordinate with SA2 for reaching conclusions
* Capture any points where we assume SA2 will resolve an issue

 Intended outcome: Approvable LS

 Deadline: Friday 2020-11-13 0000 UTC

* [AT112-e][602][POS] Rel-16 positioning UE capabilities in RRC (Intel)

 Scope: Accommodate any needed updates to the capabilities, taking into account updates to the feature lists during the meeting.

 Intended outcome: Endorsable CR for merge into the capabilities mega CR

 Deadline: Friday 2020-11-13 0000 UTC

# 4 EUTRA corrections Rel-15 and earlier

See Appendix A for reference to Work items, work item codes and WIDs.

Only essential corrections. No documents should be submitted to 4. Please submit to 4.x

## 4.4 Positioning corrections Rel-15 and earlier

Documents in this agenda item will be handled by email. No web conference is planned for this agenda item.

# 5 Rel-15 WI: New Radio (NR) Access Technology

(NR\_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 19: WID: RP-191971)

Only essential corrections

## 5.5 Positioning corrections

Corrections to both the stage 2 and stage 3 aspects related to positioning. Stage 2 CRs should be discussed with the specification rapporteur before submission.

Documents in this agenda item will be handled in a break out session.

[R2-2010138](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010138%20REL-15%20CR%2038305%20ECID.docx) Corrections to E-CID positioning Nokia, Nokia Shanghai Bell CR Rel-15 38.305 15.6.0 0042 - F NR\_newRAT-Core

[R2-2010274](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010274%20Correction%20to%20OTDOA%20positioning%20support%20description%20in%20R15.docx) Correction on OTDOA Positioning support in R15 Huawei, HiSilicon CR Rel-16 38.305 16.2.0 0047 - F NR\_newRAT-Core

[R2-2010275](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010275%20Correction%20to%20OTDOA%20positioning%20support%20description%20in%20R16.docx) Correction on OTDOA Positioning support in R16 Huawei, HiSilicon CR Rel-16 38.305 16.2.0 0048 - A NR\_pos-Core

[R2-2010569](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010569%20Neighbor%20cell.docx) Correction of A-GNSS Periodical retrival of Assistance Data Ericsson CR Rel-15 37.355 15.0.0 0277 - F NR\_newRAT-Core

[R2-2010570](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010570%20Neighbor%20cell.docx) Correction of A-GNSS Periodical retrival of Assistance Data Ericsson CR Rel-16 37.355 16.2.0 0278 - F NR\_newRAT-Core

[R2-2010571](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010571%20LPP%20ASN1.docx) Correction of hanging ASN.1 code after END Ericsson CR Rel-15 37.355 15.0.0 0279 - F NR\_newRAT-Core

[R2-2010572](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010572%20LPP%20ASN1.docx) Correction of hanging ASN.1 code after END Ericsson CR Rel-16 37.355 16.2.0 0280 - F NR\_newRAT-Core

# 6 Rel-16 NR Work Items

Essential corrections. While high maintenance intensity is expected, Rel-16 corrections are treated separately per WI.

## 6.6 NR Positioning Support

(NR\_pos-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Jun 20; WID: RP-200218, SR: RP-201342). R2 and R1 parts are 100% complete (NR TEI16 Positioning)

Documents in this agenda item will be handled in a break out session

Limit: 5 email threads

### 6.6.1 General and Stage 2 corrections

Including incoming LSs, Including impact to 36.305 and 38.305. Stage 2 corrections should be discussed with the specification rapporteur before submission.

This agenda item may use a summary document (decision to be made based on submitted tdocs).

Incoming LSs

[R2-2008746](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008746_R4-2012143.docx) Reply LS on positioning SRS during DRX inactive time (R4-2012143; contact: Apple) RAN4 LS in Rel-16 NR\_pos-Core To:RAN2 Cc:RAN1

[R2-2008748](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008748_R4-2012285.doc) LS on new measurement gap patterns for positioning measurements (R4-2012285; contact: Ericsson) RAN4 LS in Rel-16 NR\_pos-Core To:RAN2

Summary document

[R2-2010674](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010674%20Summary_for_AI_6_6_1.docx) Summary document for agenda item 6.6.1 - NR Positioning Stage2 Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_pos-Core Late

Other contributions

[R2-2008803](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5C36%20305_CR0093_%28Rel-16%29_R2-2008803.docx) Minor corrections on TS 36.305 CATT CR Rel-16 36.305 16.2.0 0093 - F NR\_newRAT-Core

[R2-2008804](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5C38%20305_CR0035_%28Rel-16%29_R2-2008804.docx) Minor corrections on TS 38.305 CATT CR Rel-16 38.305 16.2.0 0035 - F NR\_newRAT-Core

[R2-2009000](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009000%20Remove%20the%20NOTE%20in%20architecture%20figure%20in%20TS%2038.305.docx) Remove the NOTE in architecture figure in TS 38.305 Intel Corporation CR Rel-16 38.305 16.2.0 0037 - F NR\_pos-Core

[R2-2010067](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010067%20UL%20SRS%20Periodic%20Activation%20Time.docx) Activation Time for Periodic UL SRS Transmission Ericsson discussion Rel-16

[R2-2010068](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010068%20CRSUPL.docx) Correction to SUPL support for NR positioning methods Ericsson CR Rel-16 38.305 16.2.0 0038 - F NR\_pos-Core

[R2-2010069](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010069%20TS%2038.305.docx) Correction of stage 2 positioning architecture aspects Ericsson CR Rel-16 38.305 16.2.0 0039 - F NR\_pos-Core

[R2-2010070](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010070%20TS%2038.305%20Aperiodic.docx) Missing Updates for Aperiodic UL SRS Support Ericsson CR Rel-16 38.305 16.2.0 0040 - F NR\_pos-Core

[R2-2010092](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010092_%28CR%2038305%20SUPL%20support%29.docx) SUPL support for NR positioning methods Qualcomm Incorporated CR Rel-16 38.305 16.2.0 0041 - F NR\_pos-Core

[R2-2010141](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010141%20REL-16%20CR%2038305%20ECID%20and%20NR%20ECID.docx) Corrections to E-CID and NR E-CID positioning Nokia, Nokia Shanghai Bell CR Rel-16 38.305 16.2.0 0043 - F NR\_pos-Core

[R2-2010266](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010266%20Miscellaneous%20corrections%20for%2038305.docx) Miscellaneous corrections for 38305 Huawei, HiSilicon CR Rel-16 38.305 16.2.0 0044 - F NR\_pos-Core

[R2-2010267](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010267%20Correction%20to%20stage2%20spec%20for%20SRS%20%28de-%29activaton.docx) Correction to stage2 spec for SRS (de-)activaton Huawei, HiSilicon CR Rel-16 38.305 16.2.0 0045 - F NR\_pos-Core

=> Revised in R2-2010992

[R2-2010992](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010992%20Correction%20to%20stage2%20spec%20for%20SRS%20%28de-%29activaton.docx) Correction to stage2 spec for SRS (de-)activaton Huawei, HiSilicon, Ericsson CR Rel-16 38.305 16.2.0 0045 1 F NR\_pos-Core

[R2-2010268](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010268%20Correction%20to%20stage2%20of%20NR%20ECID.docx) Correction to stage2 of NR ECID Huawei, HiSilicon CR Rel-16 38.305 16.2.0 0046 - F NR\_pos-Core

[R2-2010573](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010573%20ECID.docx) Clarification on usage of ECID procedure Ericsson CR Rel-16 38.305 16.2.0 0049 - F NR\_pos-Core

[R2-2010574](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010574%20Deferred.docx) Updates on missing deferred location requests Ericsson CR Rel-16 38.305 16.2.0 0050 - F NR\_pos-Core

[R2-2010575](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010575%20loc%20format%20.docx) Alignment of the position information format with SA2 specification Ericsson CR Rel-16 38.305 16.2.0 0051 - F NR\_pos-Core

[R2-2010657](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010657%20Miscellaneous.docx) Miscellaneous correction for stage 2 Ericsson CR Rel-16 38.305 16.2.0 0052 - F NR\_pos-Core

Withdrawn/Not available

R2-2008805 Correction on the NOTE in architecture figure in TS 38.305 CATT CR Rel-16 38.305 16.2.0 0036 - F NR\_newRAT-Core Withdrawn

### 6.6.2 RRC corrections

Including impact to 36.331, 38.331, and 38.306.

This agenda item may use a summary document (decision to be made based on submitted tdocs).

Capabilities update

* [AT112-e][602][POS] Rel-16 positioning UE capabilities in RRC (Intel)

 Scope: Accommodate any needed updates to the capabilities, taking into account updates to the feature lists during the meeting.

 Intended outcome: Endorsable CR for merge into the capabilities mega CR

 Deadline: Friday 2020-11-13 0000 UTC

Summary document

[R2-2010709](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010709%20Summary%20for%20RRC.docx) Summary for RRC Corrections for Positioning Ericsson discussion

Other contributions

[R2-2008806](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5C38.331_CR2014_%28Rel-16%29_R2-2008806.docx) Corrections on 38.331 to capture agreements of area scope for posSIB validity CATT,Ericsson CR Rel-16 38.331 16.2.0 2014 - F NR\_newRAT-Core

[R2-2008807](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5C38%20331_CR2015_%28Rel-16%29_R2-2008807.docx) Corrections on description of sfn-Offset and sfn0-Offset in SSB-Configuration in TS 38.331 CATT CR Rel-16 38.331 16.2.0 2015 - F NR\_newRAT-Core

[R2-2008808](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5C38%20331_CR2016_%28Rel-16%29_R2-2008808.docx) Correction on the missed description of sfn-SSB-Offset in SSB-Configuration in TS 38.331 CATT CR Rel-16 38.331 16.2.0 2016 - F NR\_newRAT-Core

[R2-2010071](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010071%20RRC%20Missing%20field%20.docx) Corrections of field descrption of sfn-Offset and sfn-SSB-Offset Ericsson CR Rel-16 38.331 16.2.0 2172 - F NR\_pos-Core

=> Revised in R2-2010991

[R2-2010991](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010991%20RRCfieldCorrec.docx) Corrections of field descrption of sfn-Offset and sfn-SSB-Offset Ericsson CR Rel-16 38.331 16.2.0 2172 1 F NR\_pos-Core

[R2-2010269](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010269%2038.331%20CR%20on%20SI%20window%20for%20positioning%20SI%20message.docx) CR on SI window for positioning SI message Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2196 - F NR\_pos-Core

[R2-2010270](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010270%20Correction%20on%20posSRS%20configuration.docx) Correction on posSRS configuration Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2197 - F NR\_pos-Core

[R2-2010273](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010273%20Correction%20on%20posSIB%20broadcastStatus.doc) Correction on posSIB broadcastStatus Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2199 - F NR\_pos-Core

### 6.6.3 LPP corrections

This agenda item may use a summary document (decision to be made based on submitted tdocs).

Summary document

[R2-2010975](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010975_%28Summary%20of%20AI%206.6.3%20LPP%20Corrections%29.docx) Summary of LPP corrections agenda item 6.6.3 Qualcomm Incorporated discussion

Other contributions

[R2-2009042](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009042%20Discussion%20on%20whether%20PRS%20ID%20can%20be%20reused%20on%20different%20frequency%20layers.docx) Discussion on whether PRS ID can be reused on different frequency layers vivo Mobile Communication Co., discussion

[R2-2010093](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010093_%28CR%2037355%20Quality%20and%20Time%20Stamp%29.docx) Clarification of quality and time stamp for RSTD measurements Qualcomm Incorporated CR Rel-16 37.355 16.2.0 0274 - F NR\_pos-Core

[R2-2010263](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010263%20Correction%20on%20PRS%20configuration.doc) Correction on PRS configuration Huawei, HiSilicon CR Rel-16 37.355 16.2.0 0275 - F NR\_pos-Core

[R2-2010264](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010264%20Correction%20on%20NR%20E-CID.doc) Correction on NR E-CID Huawei, HiSilicon CR Rel-16 37.355 16.2.0 0276 - F NR\_pos-Core

[R2-2010265](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010265%20LPP%20corrections%20on%20UE%20capability%20signaling.docx) LPP corrections on UE capability signaling Huawei, HiSilicon discussion Rel-16 NR\_pos-Core

Not available/withdrawn

R2-2008809 Correction on sfn-SSB-Offset in NR-SSB-Config-r16 in TS 37.355 CATT CR Rel-16 37.355 16.2.0 0273 - F NR\_newRAT-Core Withdrawn

### 6.6.4 MAC corrections

[R2-2010271](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010271%20Correction%20on%20SP%20posSRS%20%28de-%29activation%20MAC%20CE.docx) Correction on SP posSRS (de-)activation MAC CE Huawei, HiSilicon CR Rel-16 38.321 16.2.0 0970 - F NR\_pos-Core

[R2-2010066](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010066%20MAC%20Discussion%20paper.docx) SRS for Positioning transmission in Connected mode DRX Ericsson discussion Rel-16

### 6.6.5 Other

# 7 Rel-16 EUTRA Work Items

Essential corrections

## 7.6 LTE Positioning

(NavIC, LTE TEI16 Positioning)

Documents in this agenda item will be handled by email. No web conference is planned for this agenda item.

# 8 Rel-17 NR Work Items

## 8.7 NR Sidelink relay SI

(FS\_NR\_SL\_relay; leading WG: RAN2; REL-17; WID: RP-201474)

Time budget: 1.5 TU

Tdoc Limitation: 5 tdocs

Email max expectation: 4 threads

### 8.7.1 Organizational

TR updates, rapporteur inputs, other organizational documents. Documents in this AI do not count towards the tdoc limitation.

Workplan

[R2-2008939](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008939%20-%20Work%20planning%20of%20R17%20SL%20relay.doc) Work planning of R17 SL relay OPPO Work Plan Rel-17 FS\_NR\_SL\_relay

Incoming LSs

[R2-2008760](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008760_S2-2006587.docx) LS on Direct Discovery and Relay in SA2 (S2-2006587; contact: Oppo) SA2 LS in Rel-17 FS\_5G\_ProSe To:RAN2 Cc:RAN1

[R2-2010693](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CDocs%5CR2-2010693.zip) LS on SA2 progress on UE-to-Network Relay and UE-to-UE Relay (S2-2007945; contact: OPPO) SA2 LS in Rel-17 FS\_5G\_ProSe To:RAN2, SA3

Other contributions

[R2-2008926](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008926%20%5BDraft%5D%20Reply%20LS%20on%20Direct%20Discovery%20and%20Relay.docx) [Draft] Reply LS on Direct Discovery and Relay CATT LS out Rel-17 5G\_V2X\_NRSL-Core To:SA2 Cc:RAN1

[R2-2010676](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010676%20-%20%5BDraft%5D%20Reply%20LS%20on%20Direct%20Discovery%20and%20Relay.docx) [Draft] Reply LS on Direct Discovery and Relay OPPO LS out Rel-17 FS\_NR\_SL\_relay To:SA2 Cc:RAN1

* [AT112-e][601][Relay] Status update to SA2 (OPPO)

 Scope: Generate a summary of RAN2 status on relaying for SA2

* Report status of both L2 and L3 relaying designs as well as architecture-independent aspects (including issues in R2-2008760), in order to coordinate with SA2 for reaching conclusions
* Capture any points where we assume SA2 will resolve an issue

 Intended outcome: Approvable LS

 Deadline: Friday 2020-11-13 0000 UTC

### 8.7.2 Scope requirements and scenarios

Refinements to the contents of the TR regarding high-level requirements and assumptions on supported scenarios.

This agenda item may use a summary document (decision to be made based on submitted tdocs).

Summary document

R2-2010984 Summary for AI\_8.7.2 Scope requirements and scenarios vivo discussion

Other contributions

[R2-2008779](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008779%20-%20Left%20issues%20on%20Scenarios%20for%20sidelink%20relay.docx) Left issues on Scenarios for sidelink relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008921](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008921%20Further%20Clarification%20on%20the%20Scenarios%20for%20NR%20Sidelink%20Relay.docx) Further Clarification on the Scenarios for NR Sidelink Relay CATT discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009584](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009584_Further%20discussion%20%20on%20scope%20and%20Scenarios%20of%20SL%20relay.docx) Further discussion on scope and scenarios of SL relay vivo discussion Rel-17

[R2-2009693](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009693%20Coverage%20Extension%20Using%20Relays.doc) Coverage Extension using Relays Lenovo, Motorola Mobility discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009694](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009694%20QoS%20support%20for%20Relays.doc) QoS support when using Relays Lenovo, Motorola Mobility discussion FS\_NR\_SL\_relay

[R2-2010658](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010658%20Scope%20and%20scenarios%20for%20NR%20sidelink%20relay.docx) Scenarios for NR sidelink relay LG Electronics Inc. discussion Rel-17

### 8.7.3 Relaying Mechanisms and their characteristics

Start to populate the TR. Put on the table mechanisms, their characteristics at least with respect to aspects A-F for L2 and L3 relay etc.

#### 8.7.3.1 Protocol stacks and procedures

Including report of [Post111-e][627][Relay] Remaining issues on L2 architecture

Email discussion summary

[R2-2009122](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CDocs%5CR2-2009122.zip) Email Report of Post111-e 627 Relay Remaining issues on L2 architecture MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

Other contributions

[R2-2008777](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008777%20-%20Left%20issues%20on%20CP%20procedure%20for%20L2%20U2N%20Relay.docx) Left issues on CP procedure for L2 U2N Relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008922](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008922%20On-demand%20SI%20Delivery%20for%20Remote%20UE.docx) On-demand SI Delivery for Remote UE CATT discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008962](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008962%20-%20Discussion%20on%20remaining%20issues%20of%20L3%20relay.doc) Discussion on remaining issues of L3 relay Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008964](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008964%20-%20Discussion%20on%20remaining%20issues%20on%20L2%20relay.docx) Discussion on remaining issues of L2 relay Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008966](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008966%20-%20RRC%20state%20and%20essential%20RRC%20procedures%20in%20L2%20U2N%20relay.doc) RRC state and essential RRC procedures in L2 U2N relay Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008983](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008983_L2RelayOpenAspects_Intel.docx) Open aspects of L2 relaying Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009030](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009030%20Discussion%20on%20remaining%20issues%20on%20L2%20Relay.doc) Discussion on remaining issues on L2 relay architecture ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009033](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009033%20Discussion%20on%20remaining%20issues%20of%20L3%20relay.doc) Discussion on Remaining issues on L3 relay ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009123](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009123.docx) Adaptation layer for PC5 at L2 UE-to-Network Relay MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009124](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009124.docx) Overhead in N3IWF based L3 relaying architecture MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009144](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009144.doc) Remaining issues on the adaptation layer for Layer-2 Relay Spreadtrum Communications discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009202](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009202%20%28R17%20SL%20Relay%20SI_A8731%20CP%20Aspects%29.doc) Control Plane Aspects for UE to NW Relays InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009203](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009203%20%28R17%20SL%20Relay%20SI_A8731%20Connection%20Establishment%29.doc) Connection Establishment and Maintenance for L2 Relays InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009206](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009206%20%28R17%20SL%20Relay%20SI%20AI8731%29.doc) Discussion on L2 Relay Architecture and QoS InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009230](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009230%20-%20RAN2%20impacts%20introduced%20by%20Layer%202%20SL%20relay.docx) RAN2 impacts introduced by Layer 2 SL relay Ericsson discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009302](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009302%20QoS.docx) QoS Control with Sidelink Relay Futurewei discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009525](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009525%20UE%20to%20UE%20relay%20data%20forwarding.doc) Discussion on data forwarding mechanisms for Layer 2 UE-to-UE Relay Apple discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009526](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009526%20Support%20of%20RRC_Inactive%20remote%20UE.doc) Discussion on RRC\_INACTIVE remote UE Apple discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009585](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009585_Open%20issues%20on%20Layer-2%20relay.doc) Open issues on Layer-2 relay vivo discussion Rel-17

[R2-2009660](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009660%20L2%20relaying%20open%20issues%20v2.doc) L2 relaying open issues Samsung Electronics GmbH discussion

[R2-2009661](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009661%20Need%20for%20relaying%20of%20on-demand%20SI%20v2.doc) Need for relaying of on-demand SI Samsung Electronics GmbH discussion

[R2-2009720](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009720-%20Discussion%20on%20L3%20UE-to-NW%20relay%20architecture.docx) Discussion on L3 UE-to-NW relay architecture Ericsson discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009891](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009891.doc) SL L2 architectrure Sony discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009901](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009901.doc) Protocol stack design for U2N relay and U2U relay case Lenovo, Motorola Mobility discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009939](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009939%20Discussion%20on%20L2%20based%20UE-to-Network.docx) Discussion on L2 based UE-to-Network Nokia, Nokia Shanghai Bell discussion FS\_NR\_SL\_relay

[R2-2010129](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010129%20Sidelink%20Relay%20Adaptation%20Layer%20Header.docx) Needed Information in Adaptation Layer Header for L2 UE-to-UE Relay Convida Wireless discussion Rel-17

[R2-2010344](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010344.doc) Remaining issues on protocol stacks and procedures for L2 relay Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010345](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010345.doc) NAS transmission and QoS management in L3 U2N relay Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

#### 8.7.3.2 Service continuity

Including report of [Post111-e][621][Relay] Service continuity

Email discussion summary

[R2-2010346](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010346%20Summary%20email%20discussion%20%5B621%5D%5BRelay%5D%20of%20Service%20continuity_final.doc) Summary email discussion [621][Relay] of Service continuity Huawei, HiSilicon report Rel-17 FS\_NR\_SL\_relay

Other contributions

[R2-2008780](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008780%20-%20Left%20issues%20on%20Service%20continuity%20for%20L2%20U2N%20relay.docx) Left issues on Service continuity for L2 U2N relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008923](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008923%20Further%20Clarification%20on%20the%20L2%20Service%20Continuity.docx) Further Clarification on the L2 Service Continuity CATT discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008967](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008967%20-%20Remaining%20issues%20for%20mobility%20procedures%20of%20L2%20relay.docx) Remaining issues on the mobility procedures for L2 relay Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009031](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009031%20Discussion%20on%20service%20continuity.doc) Discussion on Service continuity ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009068](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009068%20L3EnhancementsForFastPathSwitch.docx) L3 relay enhancements to improve path switching Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009125](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009125.docx) Service Continuity for L2 Relay and L3 Relay MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009145](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009145.doc) Discussion on service continuity for Layer-2 UE-to-Network Relay Spreadtrum Communications discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009171](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009171%20Service%20continuity%20via%20L3%20U2N%20relay.doc) Service continuity via L3 UE-to-Network relaying Samsung Electronics discussion Rel-17

[R2-2009177](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009177.docx) Service Continuity Scenarios and AS-Layer Procedures Fraunhofer HHI, Fraunhofer IIS discussion Rel-17

[R2-2009271](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009271_ServiceContinuity_Intel.docx) Further details on Service Continuity for Relaying Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009301](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009301%20service%20continuity.docx) Service Continuity with Sidelink Relay Futurewei discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009476](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009476%20Service%20continuity%20in%20SL%20relay.doc) Discussion on service continuity for layer 2 UE to NW relay Apple discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009586](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009586_Service%20continuity%20for%20L2%20and%20L3%20relay.docx) Service continuity for L2 and L3 relay vivo discussion Rel-17

[R2-2009721](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009721-%20Service%20continuity%20procedure%20and%20scenarios%20for%20sidelink%20relay.docx) Service continuity procedure and scenarios for sidelink relay Ericsson discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009938](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009938%20Service%20Continuity%20for%20UE2UE%20Relay.docx) Service Continuity for UE2UE Relay Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010329](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010329-Clarification%20of%20remote%20UE%20mobility.doc) Clarification of remote UE mobility ETRI discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010469](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010469.doc) Discussion on service continuity Xiaomi communications discussion

[R2-2010588](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010588%20Service%20continuity%20for%20SL%20relay.docx) Service continuity for SL relay LG Electronics Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010659](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010659%20service%20continuity%20for%20Remote%20UE.DOCX) Service continuity for Remote UE LG Electronics Inc. discussion Rel-17

#### 8.7.3.3 Relay selection

Including report of [Post111-e][622][Relay] Relay selection and reselection

Email discussion summary

[R2-2009523](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009523%20Summary%20Report%20of%20%5BPost111-e%5D%5B622%5D%5BRelay%5D%20Relay%20selection%20and%20reselection%20%28rapporteur%29_final.doc) Summary Report of [Post111-e][622][Relay] Relay selection and reselection Apple discussion Rel-17 FS\_NR\_SL\_relay

Other contributions

[R2-2008924](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008924%20Further%20Discussion%20on%20NR%20Sidelink%20Relay%20Selection%20and%20Reselection.docx) Further Discussion on NR Sidelink Relay Selection and Reselection CATT discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008987](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008987.docx) Further details on relay reselection Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009029](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009029%20Discussion%20on%20relay%20initiation%20and%20relay%20%28re-%29selection.doc) Discussion on Relay initiation and (re-)selection ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009069](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009069%20RelaySelection.docx) Discussion on relay selection and reselection Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009148](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009148.doc) Discussion on relay selection and reselcetion Spreadtrum Communications discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009172](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009172%20Consideration%20on%20relay%20reselection%20criteria.doc) Consideration on relay reselection criteria Samsung Electronics discussion Rel-17

[R2-2009176](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009176.docx) Relay (re)selection enhancement MediaTek Inc. discussion Rel-17

[R2-2009205](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009205%20%28R17%20SL%20Relay%20SI%20A8733%20Relay%20selection%29.doc) Relay Selection and Reselection InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009229](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009229%20-%20Remaining%20aspects%20for%20relay%20selection%20and%20reselection.docx) Remaining aspects for relay selection and reselection Ericsson discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009588](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009588_SL-RSRP%20and%20SD-RSRP%20comparison%20and%20additional%20criterion%20for%20relay%20%28re-%29selection.doc) SL-RSRP and SD-RSRP comparioson and additional criterion for relay (re-)selection vivo discussion Rel-17

[R2-2009634](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009634.docx) Considerations on relay selection and reselection KT Corp. discussion

[R2-2009857](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009857%20Relay%20reselection%20in%20the%20failure%20case%20v1.0.doc) Relay reselection in the failure case Lenovo, Motorola Mobility discussion Rel-17

[R2-2009892](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009892.doc) SL Relay selection Sony discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009972](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009972%20NR%20Sidelink%20Relay%20%28Re-%29Selection%20Criterion%20and%20Procedure.docx) NR Sidelink Relay (Re-)Selection Criterion and Procedure Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

[R2-2010005](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010005_relay_reselection.doc) Relay reselection based on discovery Kyocera discussion

[R2-2010347](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010347.docx) Remaining issues on relay selection and reselection Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010652](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010652%20PC5%20link%20failure%20handling%20for%20NR%20sidelink%20relay.docx) PC5 link failure handling for NR sidelink relay LG Electronics Inc. discussion Rel-17

#### 8.7.3.4 Other

This agenda item may use a summary document (decision to be made based on submitted tdocs).

[R2-2008778](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008778%20-%20Left%20issues%20on%20QoS%2C%20Security%20and%20L23%20comparison.docx) Left issues on QoS, Security and L23 comparison OPPO discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009650](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009650.docx) View on Paging Option 2 in L2 relay ITL discussion Rel-17

[R2-2009858](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009858%20Considerations%20on%20the%20UE-to-Network%20relay%20and%20UE-to-UE%20relay%20case%20v2.0.doc) Considerations on the UE-to-Network relay and UE-to-UE relay case Lenovo, Motorola Mobility discussion Rel-17

[R2-2010104](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010104_SLRelayRelease_Intel.docx) Release procedure for SL Relaying support Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

### 8.7.4 Discovery model and procedure for sidelink relaying

Including report of [Post111-e][623][Relay] Remaining issues on relay discovery

Email discussion summary

[R2-2008815](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008815%20Summary%20of%20%5BPost111-e%5D%5B623%5D%5BRelay%5DRemaining%20issues%20on%20relay%20discovery%20%28rapporteur%29.doc) Summary of [Post111-e][623][Relay]Remaining issues on relay discovery (rapporteur) OPPO discussion Rel-17 FS\_NR\_SL\_relay Revised

[R2-2010661](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010661%20Summary%20of%20%5BPost111-e%5D%5B623%5D%5BRelay%5DRemaining%20issues%20on%20relay%20discovery%20%28rapporteur%29.doc) Summary of [Post111-e][623][Relay]Remaining issues on relay discovery (rapporteur) OPPO discussion Rel-17 FS\_NR\_SL\_relay R2-2008815 Late

Other contributions

[R2-2008802](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008802%20Discussion%20on%20AS%20layer%20protocol%20of%20discovery%20message%20for%20SL%20relay.docx) Discussion on AS layer protocol of discovery message for SL relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008925](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008925%20Discussion%20on%20Discovery%20Message.docx) Discussion on discovery message CATT discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008965](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008965%20-%20Discussion%20on%20remaining%20issues%20of%20discovery%20and%20relay%20%28re%29selection.doc) Remaining issues on discovery and relay (re)selection Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008977](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008977.docx) Further details on SL discovery for relaying Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009032](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009032%20Discussion%20on%20sidelink%20relay%20discovery.doc) Discussion on relay discovery and link management ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009149](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009149.doc) Discussion on remaining issues on relay discovery Spreadtrum Communications discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009173](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009173%20Sidelink%20relay%20discovery%20open%20issue.doc) Sidelink relay discovery open issue Samsung Electronics discussion Rel-17

[R2-2009204](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009204%20%28R17%20SL%20Relay%20SI%20A874%20Discovery%29.doc) Discovery Procedure for SL Relays InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009228](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009228%20-%20Remaining%20aspects%20for%20discovery.docx) Remaining aspects for discovery Ericsson discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009524](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009524%20SL%20relay%20discovery_remaining_issues.doc) Discussion on remaining issues on NR Sidelink Relay discovery Apple discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009587](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009587%20Remaining%20issues%20of%20sidelink%20relay%20discovery%20procedure.doc) Remaining issues of sidelink relay discovery procedure vivo discussion Rel-17

[R2-2009633](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009633.docx) Considerations on discovery for sidelink relay KT Corp. discussion

[R2-2009638](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009638%20Discussion%20on%20differentiation%20of%20discovery%20message.doc) Discussion on differentiation of discovery message SHARP Corporation discussion Rel-17

[R2-2009970](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009970%20NR%20SL%20Relaying%20Discovery.docx) NR Sidelink Relaying Discovery Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

[R2-2009994](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009994_disc_pool.doc) Discovery resources for sidelink relaying Kyocera discussion

[R2-2010046](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010046%20Discussion%20on%20SL%20relay%20discovery%20model%20and%20procedure.docx) Discussion on relay discovery model and procedure Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010331](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010331%20On%20relay%20discovery.docx) On relay discovery MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010348](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010348.docx) Remaining issues on relay discovery Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010349](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010349.docx) Discussion on the discovery aspects related to SA2 LS S2-2006587 Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010467](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010467.doc) Discussion on scenario regarding non SL relay capable gNB Xiaomi communications discussion

[R2-2010660](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010660%20Remaining%20issues%20on%20discovery%20for%20NR%20sidelink%20relay.docx) Remaining issues on discovery for NR sidelink relay LG Electronics Inc. discussion Rel-17

## 8.11 NR positioning enhancements SI

(FS\_NR\_pos\_enh; leading WG: RAN1; REL-17; WID: RP-202094)

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 3 threads

### 8.11.1 Organizational

Rapporteur inputs and other organizational documents. Documents in this AI do not count towards the tdoc limitation.

Incoming LSs

[R2-2008707](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008707_R1-2007264.doc) LS on Latency of NR Positioning Protocols (R1-2007264; contact: Intel) RAN1 LS in Rel-17 FS\_NR\_pos\_enh To:RAN2 Cc:RAN3, SA2

[R2-2008766](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008766_S6-200269.doc) LS on Requirements on positioning for UAS (S6-200269; contact: InterDigital)   SA6     LS in    Rel-17 FS\_UASAPP   To:SA1            Cc:SA2, RAN2

TR maintenance

[R2-2010577](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010577%20TP%20for%20Positioning%20SI.docx) TP for TR 38.857 Study on NR Positioning Ericsson, Swift Navigation report Rel-17 38.857

[R2-2010576](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010576%20draft%20LS%20to%20capture%20TP.doc) draft LS to capture TP for TR 38.857 Ericsson LS out Rel-17 To:RAN1

### 8.11.2 Enhancements for commercial use cases

Scope and general discussion related to the RAN2 objective on enhancements to support high accuracy, low latency, network efficiency, and device efficiency for commercial use cases.

Including report of [Post111-e][625][POS] End-to-end latency analysis

This agenda item will use a summary document.

Email summary

[R2-2009001](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009001%20Report%20of%20625%20E2E%20latency%20v01.docx) Report of [Post111-e][625][POS] End-to-end latency analysis (Intel) Intel Corporation discussion Rel-17 FS\_NR\_pos\_enh

Summary document

[R2-2010669](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010669%20Summary%20of%208.11.2%20Enhancements%20for%20commercial%20use%20cases.docx) Summary of 8.11.2 Enhancements for commercial use cases CATT discussion Rel-17 FS\_NR\_pos\_enh Late

Other contributions

[R2-2008775](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008775%20-%20Discussion%20on%20on-demand%20DL-PRS.doc) Discussion on on-demand DL-PRS OPPO discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008776](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008776%20-%20Positioning%20in%20RRC_IDLE%20and%20RRC_INACTIVE%20state.docx) Positioning in RRC\_IDLE and RRC\_INACTIVE state OPPO discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008810](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008810%20Further%20discussion%20on%20ehancements%20for%20commercial%20use%20cases.doc) Further discussion on ehancements for commercial use cases CATT discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008885](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008885%20%28R17%20NR%20POS%20A8112%29.doc) Discussion on Positioning in Idle/Inactive mode InterDigital, Inc. discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008886](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008886%20%28R17%20NR%20POS%20A8112%29.doc) Discussion on End-to-End Latency Reduction for DL/UL Positioning InterDigital, Inc. discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008887](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008887%20%28R17%20NR%20POS%20A8112%29.doc) Discussion on On Demand Reference Signals for Positioning InterDigital, Inc. discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009002](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009002%20Support%20of%20positioning%20in%20idle%26inactive%20mode.docx) Support of positioning in idle/inactive mode Intel Corporation discussion Rel-17

[R2-2009023](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009023%20Solution%20directions%20to%20reduce%20end-to-end%20latency.docx) Solution directions to reduce end-to-end latency Intel Corporation discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009039](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009039%20Discussion%20on%20potential%20positioning%20enhancement.docx) Discussion on positioning enhancement vivo Mobile Communication Co., discussion FS\_NR\_pos\_enh

[R2-2009040](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009040%20Procedure%20of%20on%20demand%20PRS.docx) Procedure of on-demand PRS vivo Mobile Communication Co., discussion FS\_NR\_pos\_enh

[R2-2009041](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009041%20Positioning%20measurement%20transport%20in%20RRC%20idle%20and%20inactive.docx) Positioning in RRC idle and inactive state vivo Mobile Communication Co., discussion FS\_NR\_pos\_enh

[R2-2009137](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009137-Discussion%20on%20positioning%20enhancements%20for%20commercial%20use%20cases.docx) Discussion on positioning enhancements for commercial use cases Spreadtrum Communications discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009286](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009286_MovementModel.docx) Reporting movement models Fraunhofer IIS discussion R2-2007238 Revised

[R2-2009287](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009287_SituationalQuality.docx) Reporting the situational quality of RAT and RAT-independent technologies Fraunhofer IIS, Fraunhofer HHI discussion R2-2007246

[R2-2009574](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009574%20Discussion%20on%20PRS%20enhancements.doc) Discussion on PRS enhancements Beijing Xiaomi Electronics discussion Rel-17

[R2-2009577](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009577%20Positioning%20enhancements%20on%20RRC%20idle%20inactive%20UE%20and%20latency%20reduction.doc) Positioning enhancements on RRC idle/inactive UE and latency reduction Beijing Xiaomi Electronics discussion Rel-17

[R2-2009897](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009897_Pos_Tech_Final.docx) Considerations on potential positioning enhancements Sony discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010072](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010072%20Enhancements.docx) Enhancements for commercial use cases Ericsson discussion Rel-17

[R2-2010095](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010095_%28Positioning%20Enhancements%29.docx) NR Positioning Enhancements Qualcomm Incorporated discussion

[R2-2010096](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010096_%28PosLatency%29.docx) NR Positioning Latency Analysis and Enhancements Qualcomm Incorporated discussion

[R2-2010097](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010097_%28On-Demand%20PRS%29.docx) On-Demand PRS Qualcomm Incorporated discussion

[R2-2010131](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010131_MovementModel.docx) Reporting movement models Fraunhofer IIS, Fraunhofer HHI discussion R2-2009286

[R2-2010161](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010161%20On-demand%20PRS.docx) On-demand PRS transmission and dynamic PRS resource allocation Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh R2-2007128

[R2-2010276](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010276%20Discussion%20on%20IDLE%20INACTIVE%20pos%20on-demand%20PRS%20and%20latency%20analysis.docx) Discussion on IDLE INACTIVE pos, on-demand PRS and latency analysis Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010277](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010277%20Discussion%20on%20R17%20positioning%20enhancement.docx) Discussion on R17 positioning enhancement Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010472](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010472_IDLE_INACTIVE_mode_positioning.docx) Disucssion on IDLE/INACTIVE mode positioning ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010473](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010473%20Discussion%20on%20on%20demand%20PRS.docx) Discussion on on-demand PRS ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010627](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010627%20Discussion%20on%20enhancement%20for%20commercial%20use%20cases.doc) Discussion on enhancement for commercial use cases Samsung R&D Institute UK discussion

[R2-2010648](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010648%20Support%20for%20positioning%20in%20idle%20inactive%20mode.doc) Support for positioning in idle/inactive mode Samsung R&D Institute UK discussion

### 8.11.3 Integrity and reliability of assistance data and position information

#### 8.11.3.1 KPIs and use cases

Including report of [Post111-e][626][POS] Integrity use cases and specification impacts

Email discussion summary

[R2-2009129](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009129%20-%20Email%20Summary%20%5BPost111-e%5D%5B626%5D%20%28Swift%29.docx) Summary of [Post111-e][626][POS] Email Discussion on integrity use cases and specification impacts Swift Navigation discussion

Other contributions

[R2-2008811](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008811%20Discussion%20on%20integrity%20service%20level.docx) Discussion on integrity service level CATT discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009760](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009760%20Pos_integrity_IIoT.docx) Positioning integrity for Industrial IoT use cases Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009898](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009898__Pos_Integrity_Final.docx) Discussion on Integrity of positioning information Sony discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010074](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010074%20Industrial%20IoT%20use-case.docx) Industrial IoT use-case Ericsson discussion Rel-17

[R2-2010090](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010090_IIoT_Positioning_Integrity.docx) Integrity and reliability for IIoT positioning use cases Convida Wireless discussion Rel-17 38.857 FS\_NR\_pos\_enh

[R2-2010098](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010098%20Discussion%20on%20including%20PL%20Availability%20as%20an%20additional%20integrity%20KPI.docx) Discussion on including PL Availability as an additional integrity KPI ESA discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010475](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010475%20Discussion%20on%20integrity%26error%20source%20factor%20transmission.docx) Discussion on integrity&error source factor transmission ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

#### 8.11.3.2 Error sources threat models occurrence rates and failure modes

This agenda item may use a summary document (decision to be made based on submitted tdocs).

Summary document

[R2-2010700](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010700%20summary%20of%20AI%208.11.3.2.docx) Summary of 8.11.3.2 Error sources threat models occurrence rates and failure modes Intel Corporation discussion Rel-17 FS\_NR\_pos\_enh

Other contributions

[R2-2008812](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008812%20Discussion%20on%20error%20sources%20threat%20models%20occurrence%20rates%20and%20failure%20modes.docx) Discussion on error sources, threat models, occurrence rates and failure modes CATT discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009282](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009282_Integrity.docx) Error sources, threat models, occurrence rates and failure modes Fraunhofer IIS discussion Revised

[R2-2009331](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009331%20GNSS%20Integrity%20Error%20Sources.docx) Discussion on GNSS Integrity Errors Swift Navigation, Ericsson, Intel Corporation, u-blox discussion

[R2-2010061](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010061%20Text%20Proposal%20on%20GNSS%20position%20integrity%20error%20sources.docx) Text Proposal on GNSS position integrity error sources ESA discussion Rel-17 38.857 FS\_NR\_pos\_enh

[R2-2010073](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010073%20error%20sources.docx) GNSS position integrity error sources Ericsson discussion Rel-17

[R2-2010135](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010135_Integrity.docx) Error sources, threat models, occurrence rates and failure modes Fraunhofer IIS, Fraunhofer HHI discussion R2-2009282

[R2-2010278](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010278%20Discussion%20on%20threat%20models%20and%20failure%20modes.docx) Discussion on threat models and failure modes Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010642](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010642%20Introduction%20of%20Integrity%20monitoring%20for%20GNSS%20and%20its%20error.doc) Introduction of Integrity monitoring for GNSS and its error Samsung R&D Institute UK discussion

#### 8.11.3.3 Methodologies for network-assisted and UE-assisted integrity

This agenda item may use a summary document (decision to be made based on submitted tdocs).

Summary document

[R2-2010675](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010675_%28NR%20POS%20A81133%29_Summary_Integrity_Methodologies.docx) Summary of 8.11.3.3: Methodologies for network-assisted and UE-assisted integrity InterDigital discussion Rel-17 FS\_NR\_pos\_enh

Other contributions

[R2-2008774](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008774%20-%20Discussion%20on%20Methodology%20for%20Integrity.docx) Discussion on methodology for integrity OPPO discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008813](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008813%20Discussion%20on%20methodologies%20for%20network-assisted%20and%20UE-assisted%20integrity.docx) Discussion on methodologies for network-assisted and UE-assisted integrity CATT discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008888](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2008888%20%28R17%20NR%20POS%20A81133%29.doc) Discussion on methodologies for network-assisted and UE-assisted integrity InterDigital, Inc. discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009003](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009003%20Methodologies%20for%20integrity.docx) Methodologies for network-assisted and UE-assisted integrity Intel Corporation, Swift Navigation discussion Rel-17

[R2-2009043](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009043%20integrity%20signaling%20and%20procedures.docx) Integrity signaling and procedures vivo Mobile Communication Co., discussion

[R2-2009138](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009138-Discussion%20on%20integrity%20methodologies%20for%20network-assisted%20and%20UE-assisted%20integrity.docx) Discussion on integrity methodologies for network-assisted and UE-assisted integrity Spreadtrum Communications discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009333](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009333%20GNSS%20Integrity%20Methods.docx) TP for GNSS Integrity Methodologies Swift Navigation, Ericsson, Intel Corporation, u-blox discussion

[R2-2009530](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009530%20NR%20Positioning%20Integrity%20methodology.doc) Discussion on Positioning Integrity Apple discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009578](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009578%20Discussion%20on%20methodologies%20for%20positioning%20integrity.doc) Discussion on methodologies for positioning integrity Beijing Xiaomi Electronics discussion Rel-17

[R2-2009761](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2009761%20Pos_integrity_Signalling.docx) Signalling for Positioning Integrity Support Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010075](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010075%20methodologies.docx) Methodologies for network-assisted and UE-assisted integrity Ericsson discussion Rel-17

[R2-2010279](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010279%20Discussion%20for%20network-assisted%20and%20UE-assisted%20integrity.docx) Discussion for network-assisted and UE-assisted integrity Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010474](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202011%20-%20RAN2_112-e%2C%20Online%5CExtracts%5CR2-2010474%20Discussion%20of%20the%20methodologies%20for%20network-assisted%20and%20UE-assisted%20integrity.docx) Discussion of the methodologies for network-assisted and UE-assisted integrity ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh