**3GPP TSG-RAN WG4 Meeting #112-bis R4-24xxxxx**

**Hefei, China, 14 – 18 October, 2024**

**Third Generation Partnership Project (3GPP™)**

**DRAFT Meeting Report  
for  
TSG RAN WG4  
meeting: 112**

**Maastricht, Netherlands, 19/08/2024 to 23/08/2024**

Report generated on Monday, 2024-08-12 20:19 UTC

Contents:

1 Opening of the meeting 10

2 Meeting agenda, arrangement and meeting report 10

3 Incoming LS 10

4 Up to Rel-17 maintenance for LTE and NR 13

4.1 Moderator summary and conclusions (for Agenda 4) 13

4.2 UE RF requirements 14

4.3 BS RF requirements and BS conformance testing 33

4.4 UE/BS EMC requirements 41

4.5 RRM requirements 41

4.6 Demodulation and CSI requirements 81

4.7 OTA and TRP/TRS test aspects 92

4.8 Rel-15/16/17 TEI 93

5 Rel-18 maintenance for LTE and NR closed work items 97

5.1 Moderator summary and conclusions (for sub-AIs under AI 5 without specific agenda for moderator summary) 97

5.2 Spectrum related WI maintenance 98

5.3 NR Channel raster enhancement 108

5.4 Low NR band 4Rx for handheld UE and 3Tx for inter-band UL CA and EN-DC 109

5.5 NR Support for UAV 109

5.6 Enhanced LTE Support for UAV 109

5.7 Support of intra-band non-collocated EN-DC/NR-CA deployment 109

5.8 Air-to-ground network for NR 111

5.8.1 UE RF requirements 111

5.8.2 BS RF requirements and conformance testing 111

5.8.3 RRM core and performance requirements 112

5.8.4 Demodulation performance requirements 112

5.9 Further RF requirements enhancement for NR and EN-DC in FR1 113

5.9.1 UE RF requirements 113

5.9.2 RRM performance requirements 114

5.9.3 Demodulation and CSI requirements 114

5.9.3.1 8Rx UE demodulation and CSI 114

5.9.3.2 4Tx BS demodulation 116

5.9.4 Moderator summary and conclusions 117

5.10 NR RF requirements enhancement for FR2, Phase 3 117

5.10.1 UE RF requirements 117

5.10.2 BS demodulation requirements (UL 256QAM) 117

5.10.3 Moderator summary and conclusions 117

5.11 NR support for dedicated spectrum less than 5MHz for FR1 117

5.11.1 System parameter and UE RF requirements 117

5.11.2 BS RF requirements and conformance testing 118

5.11.3 RRM core and performance requirements 118

5.11.4 Demodulation performance requirements 119

5.11.4.1 UE demodulation performance and CSI requirements 120

5.11.4.2 BS demodulation performance requirements 120

5.11.5 Moderator summary and conclusions 120

5.12 NB-IoT/eMTC core & perf. requirements for NTN 121

5.12.1 UE RF requirements 121

5.12.2 SAN RF requirements and conformance testing 121

5.12.3 RRM core and performance requirements 121

5.12.4 Demodulation requirements 123

5.13 Requirement for NR FR2 multi-Rx chain DL reception 123

5.13.1 RRM core requirements 123

5.13.2 RRM performance requirements 126

5.13.3 Demodulation performance and CSI requirements 128

5.13.4 Moderator summary and conclusions 128

5.14 Even Further RRM enhancement for NR and MR-DC 129

5.14.1 RRM core requirements 129

5.14.2 RRM performance requirements 131

5.14.3 Moderator summary and conclusions 132

5.15 Further enhancements on NR and MR-DC measurement gaps and measurements without gaps 132

5.15.1 RRM core requirements 132

5.15.2 RRM performance requirements 136

5.15.3 Moderator summary and conclusions 137

5.16 Completion of specification support for bandwidth part operation without restriction in NR 137

5.16.1 RRM core and performance requirements 137

5.16.2 Moderator summary and conclusions 138

5.17 Enhanced NR support for high speed train scenario in frequency range 2 138

5.17.1 RRM core and performance requirements 138

5.17.2 Demodulation performance requirements 138

5.17.3 Moderator summary and conclusions 139

5.18 Enhancement of Multiple Input Multiple Output Over-the-Air test methodology and requirements for NR UEs 139

5.18.1 FR2 MIMO OTA test methodology enhancement 139

5.18.2 FR1 MIMO OTA test methodology enhancement 139

5.18.3 Performance requirements 139

5.18.4 Moderator summary and conclusions 139

5.19 NR demodulation performance evolution 140

5.19.1 General aspects 140

5.19.2 Advanced receiver to cancel inter-user interference for MU-MIMO demodulation requirements 140

5.19.3 Absolute physical layer throughput requirements with link adaptation 142

5.19.4 Moderator summary and conclusions 142

5.20 Multi-carrier enhancements for NR 142

5.20.1 UE RF requirements 142

5.20.2 RRM core and performance requirements 142

5.20.3 Moderator summary and conclusions 143

5.21 Further NR coverage enhancements 143

5.21.1 UE RF requirements 143

5.21.2 BS demodulation performance requirements 144

5.21.3 Moderator summary and conclusions 145

5.22 NR sidelink evolution 146

5.22.1 UE RF requirements 146

5.22.2 RRM core and performance requirements 146

5.22.3 UE demodulation performance requirements 146

5.22.4 Moderator summary and conclusions 147

5.23 NR NTN enhancement 147

5.23.1 System parameters and regulatory requirements 147

5.23.2 Co-existence study for above 10GHz bands 147

5.23.3 SAN RF requirements 147

5.23.4 SAN RF conformance testing requirements 148

5.23.5 UE RF requirements 148

5.23.6 RRM core requirements 150

5.23.7 RRM performance requirements 153

5.23.8 Demodulation performance requirements 155

5.23.8.1 SAN demodulation performance requirements 155

5.23.8.2 UE demodulation performance and CSI requirements 157

5.23.9 Moderator summary and conclusions 158

5.24 Further NR mobility enhancements 158

5.24.1 RRM Core requirements 158

5.24.2 RRM Performance requirements 162

5.24.3 Moderator summary and conclusions 165

5.25 Dual Tx/Rx Multi-SIM for NR 165

5.25.1 RRM core and performance requirements 165

5.25.2 Moderator summary and conclusions 166

5.26 Enhanced NR Sidelink Relay 166

5.26.1 RRM core and performance requirements 166

5.26.2 Moderator summary and conclusions 166

5.27 NR MIMO evolution for downlink and uplink 166

5.27.1 RRM core requirements 166

5.27.2 RRM performance requirements 168

5.27.3 Demodulation performance requirements 169

5.27.3.1 UE demodulation performance and CSI requirements 169

5.27.3.2 BS demodulation performance requirements 170

5.27.4 Moderator summary and conclusions 170

5.28 Enhanced support of reduced capability NR devices 171

5.28.1 RRM core requirements 171

5.28.2 Demodulation performance requirements 171

5.28.2.1 UE demodulation performance and CSI requirements 171

5.28.2.2 BS demodulation performance requirements 172

5.28.3 Moderator summary and conclusions 172

5.29 Network energy saving for NR 172

5.29.1 RRM core requirements 172

5.29.2 RRM performance requirements 175

5.29.3 UE demodulation performance and CSI requirements 177

5.29.4 Moderator summary and conclusions 177

5.30 IoT (Internet of Things) NTN (non-terrestrial network) enhancements 177

5.30.1 SAN RF requirements 177

5.30.2 RRM core and performance requirements 177

5.30.3 Demodulation performance requirements 177

5.30.4 Moderator summary and conclusions 177

5.31 NR Network-controlled Repeaters 177

5.31.1 RF core requirements 177

5.31.1.1 RF requirements for NCR-Fwd 179

5.31.1.2 RF requirements for NCR-MT 179

5.31.2 EMC core requirements 180

5.31.3 RF conformance testing 180

5.31.4 EMC conformance testing 183

5.31.5 RRM core and performance requirements 183

5.31.6 Demodulation performance requirements 183

5.31.7 Moderator summary and conclusions 183

5.32 Mobile IAB (Integrated Access and Backhaul) for NR 184

5.32.1 RF core requirements 184

5.32.2 RF conformance testing 184

5.32.3 RRM core and performance requirements 184

5.32.4 Demodulation performance requirements 184

5.32.5 Moderator summary and conclusions 185

5.33 Enhancement of NR dynamic spectrum sharing 185

5.33.1 UE demodulation performance requirements 185

5.33.2 Moderator summary and conclusions 185

5.34 Other Rel-18 non-spectrum related WIs 186

5.34.1 UE RF requirements 186

5.34.2 BS RF requirements 187

5.34.3 RRM requirements 187

5.34.4 Demodulation performance and CSI requirements 187

5.34.5 OTA aspects 187

5.35 Rel-18 TEI 187

5.36 Rel-18 feature list 191

6 Rel-18 on-going work items 191

6.1 Expanded and improved NR positioning 191

6.1.1 RRM core requirements maintenance 191

6.1.1.1 General aspects 191

6.1.1.2 SL Positioning and Carrier Phase Positioning 191

6.1.1.3 LPHAP use case 192

6.1.1.4 RedCap Positioning and PRS/SRS bandwidth aggregation 193

6.1.2 RRM performance requirements 194

6.1.2.1 General aspects 194

6.1.2.2 SL Positioning 195

6.1.2.3 LPHAP use case 196

6.1.2.4 RedCap Positioning 198

6.1.2.5 PRS/SRS bandwidth aggregation 201

6.1.2.6 Carrier Phase Positioning 202

6.1.3 Moderator summary and conclusions 204

6.2 Enhancement of TRP and TRS requirements and test methodologies 204

6.2.1 Enhancement maintenance of test methodology 204

6.2.2 Performance requirements 205

6.2.3 Moderator summary and conclusions 206

7 Rel-19 on-going spectrum related work items for NR and LTE 206

7.1 Moderator summary and conclusions (for AI 6) 206

7.2 Rel-19 DC of x LTE band(s), y NR band(s) (x<=6) and single or two NR SUL bands 208

7.2.1 Rapporteur input (WID/TR/big CR) 208

7.2.2 UE RF requirements for EN-DC and NE-DC of 2 DL with 2 UL (DC\_R19\_1BLTE\_1BNR\_2DL2UL) 211

7.2.3 UE RF requirements for EN-DC and NE-DC of 2 LTE and 1 NR, or of 1 LTE and 2 NR (DC\_R19\_xBLTE\_yBNR\_3DL2UL) 211

7.2.4 UE RF requirements for EN-DC and NE-DC of x LTE and y NR with total z DL bands and q UL bands (DC\_R19\_xBLTE\_yBNR\_zDLqUL) 212

7.2.5 UE RF requirements for EN-DC and NE-DC with one SUL and two SULs (DC\_R19\_LTE\_NR\_SUL\_combos) 213

7.3 Rel-19 NR CA/DC for x bands DL with y bands UL (x<7, y<3) and SUL/CA band combinations with a single SUL or two SUL cells 213

7.3.1 Rapporteur input (WID/TR/big CR) 213

7.3.2 UE RF requirements for NR intra-band CA combinations for x CC DL/y CC UL (NR\_CA\_R19\_Intra with/without UL-MIMO) 217

7.3.3 UE RF requirements for NR inter-band CA/DC configurations including inter band CA for 2 DL with up to 2UL (NR\_CADC\_R19\_2BDL\_xBUL) 218

7.3.4 UE RF requirements for NR inter-band CA/DC configurations including inter band CA for 3 DL with x UL (NR\_CADC\_R19\_3BDL\_xBUL) 223

7.3.5 UE RF requirements for NR inter-band CA/DC configurations including inter band CA for y DL with x UL (NR\_CADC\_R19\_yBDL\_xBUL) 226

7.3.6 UE RF requirements for SUL and CA band combinations with SULs (NR\_SUL\_combos\_R19) 226

7.4 Rel-19 LTE-Advanced Carrier Aggregation for x bands (x<= 6) DL with y bands (y=1, 2) UL 227

7.4.1 Rapporteur input (WID/TR/big CR) 227

7.4.2 UE RF requirements 228

7.5 Rel-19 HPUE for NR FR1 TDD/FDD single band 228

7.5.1 Rapporteur input (WID/TR/big CR) 228

7.5.2 HPUE in a single TDD band 228

7.5.2.1 UE RF requirements for PC2 and PC1.5 228

7.5.2.2 UE RF requirements for PC1 FWVM 229

7.5.3 HPUE in a single FDD band 229

7.5.3.1 UE RF requirements for PC2 229

7.5.3.2 UE RF requirements for PC1 FWVM 229

7.6 Rel-19 HPUE in a single LTE band 229

7.6.1 Rapporteur input (WID/TR/big CR) 229

7.6.2 UE RF requirements for PC2 230

7.6.3 UE RF requirements for PC1 FWVM 230

7.7 Rel-19 HPUE for DC combinations of LTE band(s) and NR band(s) 230

7.7.1 Rapporteur input (WID/TR/big CR) 230

7.7.2 UE RF requirements 231

7.8 Rel-19 HPUE for NR intra-band CA and inter-band CA/DC with/without NR SUL 232

7.8.1 Rapporteur input (WID/TR/big CR) 232

7.8.2 UE RF requirements for intra-band CA 234

7.8.3 UE RF requirements for inter-band CA/DC with high power on TDD band(s) 234

7.8.4 UE RF requirements for inter-band CA/DC with high power on FDD band(s) 236

7.8.5 UE RF requirements for inter-band CA/DC with high power on both FDD and TDD bands 237

7.9 Rel-19 Additional NR bands for NR features 237

7.9.1 Rapporteur input (WID/TR/big CR) 237

7.9.2 UE RF requirements for UL-MIMO in a single band 238

7.9.3 UE RF requirements for 4Rx 238

7.9.4 UE RF requirements for 8Rx 239

7.10 Rel-19 downlink interruption for NR and EN-DC band combinations at dynamic Tx Switching in Uplink 239

7.10.1 Rapporteur input (WID/TR/big CR) 239

7.10.2 UE RF requirements 239

7.11 Simultaneous Rx/Tx band combinations for NR CA/DC, NR SUL and LTE/NR DC in Rel-19 239

7.11.1 Rapporteur input (WID/TR/big CR) 239

7.11.2 UE RF requirements 239

7.12 Adding channel bandwidth(s) support to existing NR bands and CA/ENDC combinations in REL-19 240

7.12.1 Rapporteur input (WID/TR/big CR) 240

7.12.2 UE RF requirements 241

7.13 Introduction of the 1.4 GHz Band 242

7.13.1 General aspects 242

7.13.2 System parameters and UE RF requirements 242

7.13.3 BS RF core requirements 242

7.13.4 RRM core requirements 244

7.14 Introduction of LTE FDD band in 1800–1830 MHz for Canada 244

7.14.1 General aspects 244

7.14.2 System parameters and UE RF requirements 245

7.14.3 BS RF core requirements 245

7.14.4 RRM core requirements 246

7.15 Introduction of NR bands n87 and n88 246

7.15.1 General aspects 246

7.15.2 System parameters and UE RF requirements 246

7.15.3 BS RF core requirements 248

7.15.4 RRM core requirements 252

7.16 Introduction of NR band n68 252

7.16.1 General aspects 252

7.16.2 System parameters and UE RF requirements 253

7.16.3 BS RF core requirements 254

7.16.4 RRM core requirements 257

7.17 Introduction of NR-NTN S-band (MSS band 2000-2020 MHz UL and 2180-2200 MHz DL) 258

7.17.1 General aspects 258

7.17.2 System parameters and UE RF requirements 258

7.17.3 SAN RF core requirements 259

7.17.4 RRM core requirements 260

7.18 Introduction of IoT-NTN S-band (MSS band 2000-2020 MHz UL and 2180-2200 MHz DL) 260

7.18.1 General aspects 260

7.18.2 System parameters and UE RF requirements 260

7.18.3 SAN RF core requirements 260

7.18.4 RRM core requirements 261

7.19 Introduction of new NR NTN bands to support the Extended L-band (UL 1668-1675MHz, DL 1518-1525MHz) and the combined MSS L-band and Extended L-band ranges (DL 1518-1559 MHz, UL 1626.5-1660.5 MHz and 1668-1675 MHz) 261

7.19.1 General aspects 261

7.19.2 System parameters and UE RF requirements 261

7.19.3 SAN RF core requirements 261

7.19.4 RRM core requirements 262

7.20 Introduction of Power Class 2 and UE 40MHz Channel Bandwidth in NR band n28 262

7.20.1 General and work plan 262

7.20.2 UE RF requirements for PC2 with UL-MIMO 262

7.20.3 UE RF requirements for introducing 40MHz 263

7.20.4 Moderator summary and conclusions 264

8 Rel-19 on-going non-spectrum related work items 264

8.1 UE RF enhancements for NR FR1/FR2 and EN-DC, Phase 4 264

8.1.1 UE RF requirements 264

8.1.1.1 High power UE (HPUE) for CA in terrestrial network (TN) 264

8.1.1.1.1 Intra-band contiguous and non-contiguous UL CA with PC1.5 265

8.1.1.1.2 Inter-band UL NR-CA/EN-DC with 2 bands and 2Tx and/or 3Tx 267

8.1.1.1.3 Increasing UE transmission high power limit 268

8.1.1.2 Power domain enhancement for NR single carrier and NR intra-band UL CA for PC2 and PC3 270

8.1.1.2.1 Power domain enhancements for single carrier 270

8.1.1.2.2 MPR applicability for FR1 intra-band UL CA 272

8.1.1.2.3 MPR applicability for FR2 273

8.1.1.3 6Rx UE 274

8.1.1.3.1 Reference sensitivity requirements 274

8.1.1.3.2 MIMO layer evaluation for 6Rx UE 276

8.1.1.3.3 SRS antenna switching requirements 277

8.1.1.3.4 SRS IL imbalance 278

8.1.2 RRM core requirements 280

8.1.3 Moderator summary and conclusions 280

8.2 Study on IMT parameters for 4400 to 4800 MHz, 7125 to 8400 MHz and 14800 to 15350 MHz 281

8.2.1 General aspects 281

8.2.2 LS reply for NR in 4400 to 4800 MHz 282

8.2.3 Study the IMT parameters relevant for sharing and compatibility for 7125 to 8400 MHz frequency range 282

8.2.4 Study the IMT parameters relevant for sharing and compatibility for 14800 to 15350 MHz frequency range 284

8.2.4.1 Co-existence assumptions/simulation 284

8.2.4.2 Radio and antenna parameters 286

8.2.5 Other aspects 287

8.2.6 Moderator summary and conclusions 289

8.3 NR sidelink Intra-band Carrier Aggregation in ITS band 289

8.3.1 General aspects 289

8.3.2 UE RF requirements for intra-band non-contiguous CA 289

8.3.2.1 System parameters 289

8.3.2.2 Tx requirements (incl. MPR/A-MPR) 290

8.3.2.3 Rx requirements 291

8.3.3 UE RF requirements for intra-band contiguous CA 291

8.3.3.1 System parameters 291

8.3.3.2 Tx requirements (incl. MPR/A-MPR) 291

8.3.3.3 Rx requirements 292

8.3.4 Moderator summary and conclusions 292

8.4 NR channel BW less than 5MHz for FR1 Phase 2 293

8.4.1 General aspects 293

8.4.2 UE RF requirements for inter-band NR CA/DC with 3MHz CBW 293

8.4.3 RRM core requirements 294

8.4.4 Moderator summary and conclusions 295

8.5 Support of intra-band non-collocated EN-DC/NR-CA deployment Phase2: new receiver type(s) 296

8.5.1 General aspects 296

8.5.2 UE RF requirements 296

8.5.2.1 UE RF requirements for Type 4a/4b capable FWA UE for EN-DC/NR-CA 296

8.5.2.2 UE Capability/UE behavior and network signaling for Type 4 EN-DC/NR-CA 297

8.5.2.3 Other aspects (incl. clarification of contiguous LTE CCs) 298

8.5.3 RRM core requirements 299

8.5.4 Moderator summary and conclusions 300

8.6 Study on NR FR1 DL Fragmented Carriers 300

8.6.1 General aspects and work plan 300

8.6.2 Methods for reducing the number of UE Rx chains 300

8.6.3 Impacts on UE RF requirements and DL performance 302

8.6.4 Moderator summary and conclusions 303

8.7 NR power class 2 RedCap (Reduced Capability) UE in FR1 303

8.7.1 General aspects and work plan 303

8.7.2 UE RF requirements 303

8.7.3 Moderator summary and conclusions 304

8.8 Enhanced requirements and conductive test methodology for NR NTN and IoT NTN 305

8.8.1 General aspects and work plan 305

8.8.2 UE RF requirements for NTN HPUE 305

8.8.2.1 Coexistence study for example bands 305

8.8.2.2 Tx requirements 307

8.8.2.3 Rx requirements 309

8.8.3 Less than 5MHz for NTN 310

8.8.3.1 System parameters 310

8.8.3.2 UE RF requirements 311

8.8.3.3 SAN RF core requirements 312

8.8.3.4 RRM core requirements 313

8.8.4 NTN testing for NGSO 314

8.8.5 Moderator summary and conclusions 315

8.9 Introduction of Ku Band for NR NTN 316

8.9.1 General aspects and work plan 316

8.9.2 Coexistence study based on ITU regulations 316

8.9.3 System parameters 318

8.9.4 UE RF requirements 320

8.9.5 SAN RF core requirements 321

8.9.6 Moderator summary and conclusions 321

8.10 Enhancements for Air-to-ground network for NR 321

8.10.1 General aspects 321

8.10.2 UE RF requirements for CA and UL-MIMO 321

8.10.2.1 Intra-band contiguous CA 321

8.10.2.2 Inter-band CA 322

8.10.2.3 UL-MIMO 323

8.10.2.4 Others 324

8.10.3 BS RF requirements for CA 324

8.10.4 RRM core requirements for CA 324

8.10.5 Moderator summary and conclusions 325

8.11 NR base station (BS) RF requirement evolution for FR1/FR2 and testing 326

8.11.1 General aspects 326

8.11.2 Expected EIRP mask for upper 6GHz 326

8.11.3 OTA test enhancement 328

8.11.4 BS conformance testing 329

8.11.5 Moderator summary and conclusions 330

8.12 TRP (Total Radiated Power), TRS (Total Radiated Sensitivity) and MIMO OTA (Over the Air) testing enhancement Phase 3 330

8.12.1 General aspects 330

8.12.2 Core requirements 330

8.12.2.1 Test methodology for FR1 non-RedCap headworn XR devices 330

8.12.2.2 Test methodology and radiated performance metric for FR1 NTN devices 331

8.12.2.3 FR1 dynamic MIMO OTA test methodology 333

8.12.3 Performance requirements 334

8.12.4 Moderator summary and conclusions 334

8.13 Study on NR FR2 OTA (Over the Air) testing enhancement Phase 3 334

8.13.1 General aspects 334

8.13.2 RF testing methodology for FR2 non-handheld UE that can transmit simultaneously with multi-panel 335

8.13.3 Moderator summary and conclusions 335

8.14 Study on spatial channel model for demodulation performance requirements 335

8.14.1 General aspects and work plan 335

8.14.2 Spatial channel modelling methodology 336

8.14.3 Moderator summary and conclusions 338

8.15 NR Radio Resource Management (RRM) Phase 5 338

8.15.1 General aspects 338

8.15.2 FR2-1 SSB based L3 measurement delay reduction for connected mode 338

8.15.2.1 FR2-1 L3 measurement delay by optimizing Rx beam sweeping factor 338

8.15.2.2 FR2-1 L3 measurement delay by optimizing CSSF outside gap in CA/DC 340

8.15.3 Fast SCell activation for UE supporting Rel-18 EMR 342

8.15.4 Moderator summary and conclusions 343

8.16 NR demodulation performance Phase 5 344

8.16.1 General aspects and work plan 344

8.16.2 UE demodulation performance requirements for 8Rx with MMSE-IRC 344

8.16.3 BS demodulation performance requirements for MMSE-IRC 345

8.16.4 Moderator summary and conclusions 347

8.17 Artificial Intelligence (AI)/Machine Learning (ML) for NR Air Interface 347

8.17.1 General aspects 347

8.17.2 Testability and interoperability issues for beam management 348

8.17.3 Testability and interoperability issues for positioning accuracy enhancement 351

8.17.4 Testability and interoperability issues for CSI compression and CSI prediction 352

8.17.5 Moderator summary and conclusions 354

8.18 NR MIMO Phase 5 354

8.18.1 General aspects and work plan 354

8.18.2 UE RF requirements 355

8.18.3 RRM core requirements 356

8.18.4 Moderator summary and conclusions 357

8.19 Evolution of NR duplex operation: Sub-band full duplex (SBFD) 357

8.19.1 General aspects (including RAN4 aspects for SBFD system parameters) 357

8.19.2 BS RF requirements 359

8.19.2.1 Potentially new requirements for SBFD operation for FR1 and FR2-1 359

8.19.2.2 Modification of existing Tx requirements for FR1 and FR2-1 360

8.19.2.3 Modification of existing Rx requirements for FR1 and FR2-1 361

8.19.3 RRM core requirements 363

8.19.4 Moderator summary and conclusions 364

8.20 Study on solutions for Ambient IoT (Internet of Things) in NR 365

8.20.1 General aspects 365

8.20.2 Co-existence study for ambient IoT and NR/LTE 365

8.20.2.1 Deployment scenarios and spectrum usage 366

8.20.2.2 Co-existence evaluations 367

8.20.3 RF requirement impact 369

8.20.3.1 Ambient IoT BS 369

8.20.3.2 Ambient IoT device 369

8.20.3.3 Intermediate note (UE) 371

8.20.4 Moderator summary and conclusions 371

8.21 Enhancements of network energy savings for NR 372

8.21.1 General aspects and work plan 372

8.21.2 RRM core requirements 372

8.21.3 Moderator summary and conclusions 374

8.22 Low-power wake-up signal and receiver for NR (LP-WUS/WUR) 374

8.22.1 General aspects 374

8.22.2 UE RF requirements for LP-WUS/WUR 375

8.22.2.1 System parameters 375

8.22.2.2 Rx requirements of REFSENS, ASCS and ACS 376

8.22.2.3 Rx requirements of IBB, OBB, intermodulation, spurious emissions and others 377

8.22.2.4 Testability for UE RF requirements 378

8.22.3 BS RF requirements for LP-WUS/WUR 378

8.22.4 RRM core requirements for LP-WUS/WUR 379

8.22.4.1 Simulation assumptions and results 379

8.22.4.2 RRM core requirements 380

8.22.5 Moderator summary and conclusions 382

8.23 NR mobility enhancements Phase 4 383

8.23.1 General aspects and work plan 383

8.23.2 RRM core requirements 383

8.23.3 Moderator summary and conclusions 385

8.24 XR for NR Phase 3 385

8.24.1 General aspects and work plan 385

8.24.2 RRM core requirements 385

8.24.3 Moderator summary and conclusions 387

8.25 Non-Terrestrial Networks (NTN) for NR Phase 3 387

8.25.1 General aspects 387

8.25.2 UE RF requirements 388

8.25.2.1 RedCap UE RF requirements 388

8.25.2.2 Other requirements 389

8.25.3 SAN RF requirements 390

8.25.4 RRM core requirements 390

8.25.5 Moderator summary and conclusions 392

8.26 Non-Terrestrial Networks (NTN) for Internet of Things (IoT) Phase 3 393

8.26.1 General aspects and work plan 393

8.26.2 RF core requirements 393

8.26.3 RRM core requirements 393

8.26.4 Moderator summary and conclusions 395

9 Liaison output to other groups and related issues 395

9.1 R17 related 395

9.2 R15, R16 related 395

9.3 Moderator summary and conclusions 395

10 RAN task and other topics 396

10.1 Specification quality improvement (RP-240782) 396

10.1.1 UE RF specifications TS 38.101-1/-2/-3 396

10.1.1.1 Technical wording ambiguities and Table modifications 397

10.1.1.2 Work practice enhancements 398

10.1.1.3 Larger specification structure enhancementsf 398

10.1.2 RRM specification TS 38.133 399

10.1.2.1 Specification improvement in R19 timeframe 399

10.1.2.2 CR handling 400

10.2 Solution to enable HPUE maximum transmit power in downlink CA with single UL transmission (RP-241625) 402

11 New or revised WID/SID 405

12 Any other business 408

13 Close of the meeting 408

## 1 Opening of the meeting

The Chair Xizeng Dai (Huawei) opened the meeting at RAN4#112 on 19/08/2024 at 09:00.

Dominique Everaere (Ericsson) provided the welcome speech.

**Intellectual Property Rights Declaration Policy**

The attention of the delegates to the meeting of this Technical Specification Group was drawn to the fact that 3GPP Individual Members have the obligation under the IPR Policies of their respective Organizational Partners to inform their respective Organizational Partners of Essential IPRs they become aware of.

The delegates were asked to take note that they were thereby invited:

- to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.

- to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Information Statement and the Licensing declaration forms.

**Statement regarding competition law**

The attention of the delegates to the meeting was drawn to the fact that 3GPP activities were subject to all applicable antitrust and competition laws and that compliance with said laws was therefore required by any participant of the meeting, including the Chair and Vice-Chairs and were invited to seek any clarification needed with their legal counsel. The leadership would conduct the present meeting with impartiality and in the interests of 3GPP. Delegates were reminded that timely submission of work items in advance of TSG/WG meetings was important to allow for full and fair consideration of such matters.

**Meeting arrangements**

The meeting was conducted in three parallel sessions; Main session, RRM session, and BS RF Test Demod session. The Main session was chaired by RAN4 Chair Xizeng Dai (Huawei), RRM session was chaired by RAN4 Vice Chair Shan Yang (China Telecom), and BS RF Test Demod session was chaired by RAN4 Vice Chair Gene Fong (Qualcomm). The sessions were further broken down into separate GTW sessions (separate meeting rooms in F2F meeting). Webinar sessions were made available for online particpants.

Note: One or two additional offline(s) / adhoc session(s) may be scheduled according to RAN conclusion. Total three parallel GTW sessions would be scheduled. Plus, any additonal Offline(s) / ad hoc sesion(s) = ad hoc room or breakout room in F2F meeting.

**Check-in for Registered Delegates**

The attention of the delegates to this meeting was drawn to the fact that it is not permitted to check in other delegates on their behalf. In the even of technical difficulties preventing check in, delegates are encouraged to contact in person MCC.

**Ordinary E-meeting participation**

Attendance at ordinary e-meetings now counts towards accrual and maintenance of voting rights.

- A delegate is deemed to have attended a given meeting if they confirm their participation by check in. If a delegate does not check in during the meeting, it shall be assumed that the individual did not attend.

**Face-to-Face meeting with one-way remote participation (going forward there is no longer two-way remote)**

When it is a face-to-face (ordinary) meeting with one-way remote participation.

- In a meeting designated as face to face (ordinary), those participating remotely are not to be counted toward quorum or attendance, and are not allowed to vote

**F2F network usage conditions**

The PCG has laid down the following network usage conditions as provided below:

**Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws**.

**Users shall not engage in non-work related activities that consume excessive bandwidth** or cause significant degradation of the performance of the network.

Since the **network is a shared resource**, users should exercise some basic etiquette when using the 3GPP network at a meeting. It is understood that high bandwidth applications such as downloading large files or video streaming might be required for business purposes, but delegates should be strongly discouraged in performing these activities for personal use. Downloading a movie or doing something in an interactive environment for personal use essentially wastes bandwidth that others need to make the meeting effective. The meeting Chair should remind end users that the network is a shared resource; the more one user grabs, the less there is for another. Email and its attachments already take up significant bandwidth (certain email programs are not very bandwidth efficient). In case of need the chair can ask the delegates to restrict IT usage to things that are essential for the meeting itself.

**1. DON’T place your WiFi device in ad-hoc mode**

**2. DON’T set up a personal hotspot in the meeting room**

**3. DO try 802.11a if your WiFi device supports it**

**4. DON’T manually allocate an IP address**

**5. DON’T be a bandwidth hog by streaming video, playing online games, or downloading huge files**

**6. DON’T use packet probing software which clogs the local network (e.g., packet sniffers or port scanners)**

**Recording of RAN4 Meeting**

Recording of the GoToWebinar sessions of the present meeting is strictly prohibited. No individual or entity – including the speakers and/or the authors – may electronically record any portion of the meeting without prior written consent of the Chair and all the RAN4 meeting participants.

**Snapshot of contributions type areas submitted in 3GU before the start of the meeting: Total: 2465**

**Figure 1: Breakdown of contributions type areas for RAN4#112 pre-meeting**

At the beginning of the meeting, there are 805 CRs (60 was either withdrawn/revised) that have been submitted to the meeting.

1. There are 545 CRs that are marked as available in 3GU

2. There are 40 CRs with parsing failure issues (note: the list of tdocs have already been submitted on RAN4 reflector)

[R4-2411050](file:///D:\RAN4%23112\Docs\R4-2411050.zip)

[R4-2411051](file:///D:\RAN4%23112\Docs\R4-2411051.zip)

[R4-2411345](file:///D:\RAN4%23112\Docs\R4-2411345.zip)

[R4-2411346](file:///D:\RAN4%23112\Docs\R4-2411346.zip)

[R4-2411351](file:///D:\RAN4%23112\Docs\R4-2411351.zip)

[R4-2411363](file:///D:\RAN4%23112\Docs\R4-2411363.zip)

[R4-2411364](file:///D:\RAN4%23112\Docs\R4-2411364.zip)

[R4-2411366](file:///D:\RAN4%23112\Docs\R4-2411366.zip)

[R4-2411369](file:///D:\RAN4%23112\Docs\R4-2411369.zip)

[R4-2411371](file:///D:\RAN4%23112\Docs\R4-2411371.zip)

[R4-2411373](file:///D:\RAN4%23112\Docs\R4-2411373.zip)

[R4-2411375](file:///D:\RAN4%23112\Docs\R4-2411375.zip)

[R4-2411377](file:///D:\RAN4%23112\Docs\R4-2411377.zip)

[R4-2411378](file:///D:\RAN4%23112\Docs\R4-2411378.zip)

[R4-2411611](file:///D:\RAN4%23112\Docs\R4-2411611.zip)

[R4-2411612](file:///D:\RAN4%23112\Docs\R4-2411612.zip)

[R4-2412002](file:///D:\RAN4%23112\Docs\R4-2412002.zip)

[R4-2412155](file:///D:\RAN4%23112\Docs\R4-2412155.zip)

[R4-2412162](file:///D:\RAN4%23112\Docs\R4-2412162.zip)

[R4-2412178](file:///D:\RAN4%23112\Docs\R4-2412178.zip)

[R4-2412285](file:///D:\RAN4%23112\Docs\R4-2412285.zip)

[R4-2412287](file:///D:\RAN4%23112\Docs\R4-2412287.zip)

[R4-2412288](file:///D:\RAN4%23112\Docs\R4-2412288.zip)

[R4-2412445](file:///D:\RAN4%23112\Docs\R4-2412445.zip)

[R4-2412513](file:///D:\RAN4%23112\Docs\R4-2412513.zip)

[R4-2412516](file:///D:\RAN4%23112\Docs\R4-2412516.zip)

[R4-2412870](file:///D:\RAN4%23112\Docs\R4-2412870.zip)

[R4-2412874](file:///D:\RAN4%23112\Docs\R4-2412874.zip)

[R4-2412875](file:///D:\RAN4%23112\Docs\R4-2412875.zip)

[R4-2412876](file:///D:\RAN4%23112\Docs\R4-2412876.zip)

[R4-2413083](file:///D:\RAN4%23112\Docs\R4-2413083.zip)

[R4-2413084](file:///D:\RAN4%23112\Docs\R4-2413084.zip)

[R4-2413085](file:///D:\RAN4%23112\Docs\R4-2413085.zip)

[R4-2413086](file:///D:\RAN4%23112\Docs\R4-2413086.zip)

[R4-2413087](file:///D:\RAN4%23112\Docs\R4-2413087.zip)

[R4-2413088](file:///D:\RAN4%23112\Docs\R4-2413088.zip)

[R4-2413089](file:///D:\RAN4%23112\Docs\R4-2413089.zip)

[R4-2413090](file:///D:\RAN4%23112\Docs\R4-2413090.zip)

[R4-2413091](file:///D:\RAN4%23112\Docs\R4-2413091.zip)

[R4-2413092](file:///D:\RAN4%23112\Docs\R4-2413092.zip)

3. There are 195 CAT A CRs reserved in 3GU (note: if any CAT A CRs are missing, please notify chair or session chairs)

4. There are 60 CRs that are marked as withdrawn in 3GU

5. There are 5 CAT F CRs not made available by Huawei, HiSilicon. The tdoc numbers are:

a. [R4-2312782](file:///D:\RAN4%23112\Docs\R4-2312782.zip)

b. [R4-2412781](file:///D:\RAN4%23112\Docs\R4-2412781.zip)

c. [R4-2412779](file:///D:\RAN4%23112\Docs\R4-2412779.zip)

d. [R4-2412778](file:///D:\RAN4%23112\Docs\R4-2412778.zip)

e. [R4-2412777](file:///D:\RAN4%23112\Docs\R4-2412777.zip)

Breakdown of available CRs at start of the meeting:

- Rel-13 CR (1)

- MCC: This is for a (NB\_IOT-Perf) CR on RSRP-ThresholdsNPRACH-InfoList for NB-IoT (Cat-F Rel-13)

- Rel-14 CR (3)

- Rel-15 CRs (28)

- Rel-16 CRs (56)

- Rel-17 CRs (162)

- Rel-18 CRs (495)

- Rel-19 CR (14)

- MCC: There should not be any Rel-19 CRs for agreement at this stage. They were all withdrawn.

## 2 Meeting agenda, arrangement and meeting report

[**R4-2411000**](file:///D:\RAN4%23112\Docs\R4-2411000.zip) **RAN4#111 Meeting Report**

*Type: report For: Approval  
 Source: ETSI MCC*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Approved.**

[**R4-2411001**](file:///D:\RAN4%23112\Docs\R4-2411001.zip) **Agenda for RAN4#112**

*Type: agenda For: Approval  
 Source: RAN4 Chair (Huawei)*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Approved.**

[**R4-2411002**](file:///D:\RAN4%23112\Docs\R4-2411002.zip) **RAN4#112 Meeting Arrangements and Guidelines**

*Type: other For: Approval  
 Source: RAN4 Chair (Huawei)*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Approved.**

## 3 Incoming LS

[**R4-2411003**](file:///D:\RAN4%23112\Docs\R4-2411003.zip) **Reply LS on SL positioning measurement**

*Type: LS in For: Information  
 Original outgoing LS: R1-2405511, to RAN2, RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411004**](file:///D:\RAN4%23112\Docs\R4-2411004.zip) **LS on Rel-18 RAN1 UE features list for NR after RAN1#117**

*Type: LS in For: Information  
 Original outgoing LS: R1-2405566, to RAN2, RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411005**](file:///D:\RAN4%23112\Docs\R4-2411005.zip) **LS on Rel-18 RAN1 UE features list for LTE after RAN1#117**

*Type: LS in For: Information  
 Original outgoing LS: R1-2405569, to RAN2, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411006**](file:///D:\RAN4%23112\Docs\R4-2411006.zip) **Reply LS on Reference Point for SSB-TimeOffset**

*Type: LS in For: Information  
 Original outgoing LS: R1-2405719, to RAN2, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411007**](file:///D:\RAN4%23112\Docs\R4-2411007.zip) **LS on UE assistance information**

*Type: LS in For: Information  
 Original outgoing LS: R1-2405736, to RAN4, cc RAN2  
 Source: RAN1*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411008**](file:///D:\RAN4%23112\Docs\R4-2411008.zip) **LS on RACH during uplink transmission extension**

*Type: LS in For: Information  
 Original outgoing LS: R2-2405766, to RAN1, cc RAN4  
 Source: RAN2*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411009**](file:///D:\RAN4%23112\Docs\R4-2411009.zip) **LS on UL synchronization for contention based Msg3 transmission without Msg1/Msg2**

*Type: LS in For: Information  
 Original outgoing LS: R2-2405769, to RAN1, RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411010**](file:///D:\RAN4%23112\Docs\R4-2411010.zip) **Reply LS on SL positioning measurements**

*Type: LS in For: Information  
 Original outgoing LS: R2-2405872, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411011**](file:///D:\RAN4%23112\Docs\R4-2411011.zip) **LS reply on 3Tx SAR solution for inter-band CA with PC1.5**

*Type: LS in For: Information  
 Original outgoing LS: R2-2406022, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411012**](file:///D:\RAN4%23112\Docs\R4-2411012.zip) **Reply LS on IE supportedBandwidthCombinationSetIntraENDC and IE intraBandENDC-Support**

*Type: LS in For: Information  
 Original outgoing LS: R2-2406111, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411013**](file:///D:\RAN4%23112\Docs\R4-2411013.zip) **Reply LS on Rel-18 higher-layers parameter list**

*Type: LS in For: Information  
 Original outgoing LS: R2-2406148, to RAN1, cc RAN3, RAN4  
 Source: RAN2*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411014**](file:///D:\RAN4%23112\Docs\R4-2411014.zip) **Reply LS on RAN4 vs RAN2 Cricket Match**

*Type: LS in For: Information  
 Original outgoing LS: R2-2406149, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411015**](file:///D:\RAN4%23112\Docs\R4-2411015.zip) **LS on Development of NB-IoT test cases for Release 15 and Release 16**

*Type: LS in For: Information  
 Original outgoing LS: R5-243972, to GSMA TSG Internet of Things (IoT) group, cc RAN4, GCF SG, GCF CAG  
 Source: RAN5*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411016**](file:///D:\RAN4%23112\Docs\R4-2411016.zip) **LS on Avoiding Cross-TSG TEI**

*Type: LS in For: Information  
 Original outgoing LS: RP-241686, to CT, CT1, CT3, CT4, CT6, SA, SA1, SA2, SA3, SA4, SA5, SA6, cc RAN1, RAN2, RAN3, RAN4, RAN5  
 Source: RAN*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

[**R4-2411017**](file:///D:\RAN4%23112\Docs\R4-2411017.zip) **Blocking requirements for extended L band**

*Type: LS in For: Information  
 Original outgoing LS: SES(24)000037, to RAN4, cc ETSI TC ERM  
 Source: ETSI TC SES*

**Abstract:**

[RAN4#112][100] Main Session

**Decision: Noted.**

## 4 Up to Rel-17 maintenance for LTE and NR

The following guidance are provided for maintenance work under AI 4 ~ AI 5:

‒ For maintenance agenda AI 4 (Rel-15/16/17) and AI 5 (Rel-18), formal CRs are expected and multiple CRs per company in the lowest agenda are allowed. For tracking the changes easily, it expected that one batch of CRs (Cat-F/A/…) will just cover a single topic/WI rather than multiple topics/WIs and Cat-F CR with corresponding Cat-A CRs needs be submitted under the same agenda.

‒ When submitting contributions to AI 4, AI 5.2, AI 5.34, please add (WI\_code) in the beginning of titles for both discussion files and CRs to facilitate moderators and session chairs handling.

‒ When reserving the tdoc number, please use the correct WI code rather than simply using TEI and fill the column of “Related WIs” in your reservation spreadsheet. If you submit a draft CR with TEI as WI code, please inform session chair.

‒ For all the endorsed draft CRs in this bis meeting, please re-submit them in the next ordinary meeting.

‒ The contributions corresponding to incoming LS for Rel-15/16/17 are expected to be submitted in AI 9.

‒ The contributions corresponding to incoming LS for Rel-18/19 are expected to be submitted to (sub-) agenda dedicated to the individual WIs. If there is no dedicated agenda, please submit to AI 5.2 or AI 5.34 depending on whether it is spectrum related topic or non-spectrum related topic.

[**R4-2412412**](file:///D:\RAN4%23112\Docs\R4-2412412.zip) **CR on MSD value correction for power class 5 cross band isolation**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2430 rev Cat: F (Rel-17)  
  
 Source: LG Electronics France*

**Decision:** The document was **not treated**.

[**R4-2412425**](file:///D:\RAN4%23112\Docs\R4-2412425.zip) **CR on MSD value correction for power class 5 cross band isolation**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2431 rev Cat: A (Rel-17)  
  
 Source: LG Electronics France*

**Decision:** The document was **withdrawn**.

[**R4-2412430**](file:///D:\RAN4%23112\Docs\R4-2412430.zip) **CR on MSD value correction for power class 5 cross band isolation**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2432 rev Cat: A (Rel-18)  
  
 Source: LG Electronics France*

**Decision:** The document was **not treated**.

### 4.1 Moderator summary and conclusions (for Agenda 4)

[**R4-2412803**](file:///D:\RAN4%23112\Docs\R4-2412803.zip) **Topic summary for [112][101] Upto\_R17\_UERF\_maintenance**

*Type: other For: Information  
 Source: Moderator(OPPO)*

**Abstract:**

Summary for AI 4.2, 4.8

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 4.2 UE RF requirements

**Issue 1-1-1: About n28/n83 30MHz channel confinement**

[**R4-2412614**](file:///D:\RAN4%23112\Docs\R4-2412614.zip) **About n28/n83 30MHz channel confinement**

*Type: other For: Approval  
 Source: Qualcomm France*

**Abstract:**

This contribution discusses the current wording for n28/n83 30MHz channel confinement and proposes how to change it.

**Decision: Noted.**

CR

[**R4-2412615**](file:///D:\RAN4%23112\Docs\R4-2412615.zip) **CR on n28 30MHz channel confinement**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2454 rev Cat: F (Rel-16)  
  
 Source: Qualcomm France*

**Abstract:**

Changing n28 channel confinement wording to be aligned with that specified for 20MHz and 25MHz channel

**Decision:** The document was **not treated**.

[**R4-2412616**](file:///D:\RAN4%23112\Docs\R4-2412616.zip) **CR on n28 and n83 30MHz channel confinement**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2455 rev Cat: F (Rel-17)  
  
 Source: Qualcomm France*

**Abstract:**

Changing n28 and n83 channel confinement wording to be aligned with that specified for 20MHz and 25MHz channel

**Decision:** The document was **not treated**.

[**R4-2412617**](file:///D:\RAN4%23112\Docs\R4-2412617.zip) **CR on n28 and n83 30MHz channel confinement**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2456 rev Cat: A (Rel-18)  
  
 Source: Qualcomm France*

**Abstract:**

Changing n28 and n83 channel confinement wording to be aligned with that specified for 20MHz and 25MHz channel. MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**Issue 1-2-1: MBW of Min output power for FR2 UE PC5/6**

[**R4-2411717**](file:///D:\RAN4%23112\Docs\R4-2411717.zip) **Discussion on Measurement Bandwidth for FR2 UE Tx**

*Type: discussion For: Discussion  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

CR

[**R4-2411718**](file:///D:\RAN4%23112\Docs\R4-2411718.zip) **CR to TS 38.101-2: Correction on Measurement BW for FR2 PC5, 6**

*Type: CR For: Agreement  
 38.101-2 v17.14.0 CR-0753 rev Cat: F (Rel-17)  
  
 Source: Murata Manufacturing Co Ltd.*

**Decision:** The document was **not treated**.

[**R4-2411719**](file:///D:\RAN4%23112\Docs\R4-2411719.zip) **CR to TS 38.101-2: Correction on Measurement BW for FR2 PC5, 6**

*Type: CR For: Agreement  
 38.101-2 v18.6.0 CR-0754 rev Cat: A (Rel-18)  
  
 Source: Murata Manufacturing Co Ltd.*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**Issue 1-3-1: On the definition of geosynchronous satellites**

[**R4-2412868**](file:///D:\RAN4%23112\Docs\R4-2412868.zip) **(NR\_NTN\_Solutions) On the definition of geosynchronous satellites**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412943**](file:///D:\RAN4%23112\Docs\R4-2412943.zip) **(NR\_NTN\_solutions-Core) Discussion on clarification for Terminology GSO**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**Issue 1-4-1/2: DMRS bundling feature for NTN**

[**R4-2412985**](file:///D:\RAN4%23112\Docs\R4-2412985.zip) **(NR\_NTN\_solutions-Core) DMRS bundling feature support from Rel-17**

*Type: other For: Approval  
 Source: Ericsson*

**Decision: Noted.**

CR

[**R4-2412986**](file:///D:\RAN4%23112\Docs\R4-2412986.zip) **(NR\_NTN\_solutions-Core) CR to 38.101-5 DMRS bundling requirement update for NTN GSO**

*Type: CR For: Agreement  
 38.101-5 v17.8.0 CR-0118 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Decision:** The document was **not treated**.

[**R4-2411306**](file:///D:\RAN4%23112\Docs\R4-2411306.zip) **(NR\_NTN\_solutions-Core) CR to 38.101-5 to clarify applicability of phase continuity requirements in R17**

*Type: CR For: Agreement  
 38.101-5 v17.8.0 CR-0105 rev Cat: F (Rel-17)  
  
 Source: Apple, Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**Issue 1-6-1: DL interruptions for 2Tx vs 1Tx switching**

[**R4-2413319**](file:///D:\RAN4%23112\Docs\R4-2413319.zip) **(NR\_RF\_FR1\_enh-Core) DL interruptions for 2Tx vs 1Tx switching**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**CRs for 38.101-1 (31)**

**#1**

[**R4-2411036**](file:///D:\RAN4%23112\Docs\R4-2411036.zip) **CR to R17 38.101-1 to add 25MHz CBW to NS\_18 emissions requirement**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2373 rev Cat: F (Rel-17)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

this CR add the 25MHz CBW to the NS\_18 emissions requirement for which AMPR is defined

**Decision:** The document was **not treated**.

[**R4-2411046**](file:///D:\RAN4%23112\Docs\R4-2411046.zip) **CR to R18 38.101-1 to add 25MHz CBW to NS\_18 emissions requirement**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2374 rev Cat: A (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

this CR add he 25MHz CBW to the NS\_18 emissions requirement for which AMPR is defined

**Decision:** The document was **not treated**.

**#2**

[**R4-2411162**](file:///D:\RAN4%23112\Docs\R4-2411162.zip) **(NR\_PC2\_CA\_R17\_2BDL\_2BUL-Core) CR for 38.101-1 to add general text descriptions on higher power class(es) applicability for higher order band combinations**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2378 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision:** The document was **not treated**.

[**R4-2411163**](file:///D:\RAN4%23112\Docs\R4-2411163.zip) **(NR\_PC2\_CA\_R17\_2BDL\_2BUL-Core) CR for 38.101-1 to add general text descriptions on higher power class(es) applicability for higher order band combinations**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2379 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#3**

[**R4-2411240**](file:///D:\RAN4%23112\Docs\R4-2411240.zip) **(NR\_newRAT-Core) Clarification on modifiedMPR-Behaviour**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2382 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Address a raised issue in [R4-2407625](file:///D:\RAN4%23112\Docs\R4-2407625.zip).

**Decision:** The document was **not treated**.

[**R4-2411241**](file:///D:\RAN4%23112\Docs\R4-2411241.zip) **(NR\_newRAT-Core) More on clarification on modifiedMPR-Behaviour**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2383 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Address a raised issue in [R4-2407625](file:///D:\RAN4%23112\Docs\R4-2407625.zip).

**Decision:** The document was **not treated**.

**#4**

[**R4-2411532**](file:///D:\RAN4%23112\Docs\R4-2411532.zip) **(NR\_CADC\_R17\_2BDL\_xBUL) Removal of CA combinations containing n48(A-C)**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2386 rev Cat: F (Rel-17)  
  
 Source: Rohde & Schwarz*

**Decision:** The document was **not treated**.

[**R4-2411533**](file:///D:\RAN4%23112\Docs\R4-2411533.zip) **(NR\_CADC\_R17\_2BDL\_xBUL) Removal of CA combinations containing n48(A-C)**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2387 rev Cat: A (Rel-18)  
  
 Source: Rohde & Schwarz*

**Decision:** The document was **not treated**.

**#5**

[**R4-2411588**](file:///D:\RAN4%23112\Docs\R4-2411588.zip) **CR for TS 38.101-1 Rel-15 correction on the terminology of emission bandwidth for NS\_04**

*Type: CR For: Agreement  
 38.101-1 v15.26.0 CR-2388 rev Cat: F (Rel-15)  
  
 Source: Sony, Ericsson*

**Decision:** The document was **not treated**.

[**R4-2411589**](file:///D:\RAN4%23112\Docs\R4-2411589.zip) **CR for TS 38.101-1 Rel-16 correction on the terminology of emission bandwidth for NS\_04**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2389 rev Cat: A (Rel-16)  
  
 Source: Sony, Ericsson*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2411590**](file:///D:\RAN4%23112\Docs\R4-2411590.zip) **CR for TS 38.101-1 Rel-17 correction on the terminology of emission bandwidth for NS\_04**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2390 rev Cat: A (Rel-17)  
  
 Source: Sony, Ericsson*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2411591**](file:///D:\RAN4%23112\Docs\R4-2411591.zip) **CR for TS 38.101-1 Rel-18 correction on the terminology of emission bandwidth for NS\_04**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2391 rev Cat: A (Rel-18)  
  
 Source: Sony, Ericsson*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#6**

[**R4-2411668**](file:///D:\RAN4%23112\Docs\R4-2411668.zip) **(NR\_redcap-Core) Correction of the channel raster for RedCap UEs by added entries**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2393 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the a channel raster for RedCap by adding intermediary 10 kHz entries (consistent with the enhanced raster for Rel-18) to make sure all RedCap UEs are compliant with minimum requirements for any UE specific channel bandwidth and location configurable by RRC.

**Decision:** The document was **not treated**.

[**R4-2411669**](file:///D:\RAN4%23112\Docs\R4-2411669.zip) **(NR-redcap-Core) Correction of the channel raster for RedCap UEs by added entries**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2394 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

MCC: This is CAT A CR. CR to correct the a channel raster for RedCap by adding intermediary 10 kHz entries (consistent with the enhanced raster for Rel-18) to make sure all RedCap UEs are compliant with minimum requirements for any UE specific channel bandwidth and location configurable by RRC.

**Decision:** The document was **not treated**.

**#7**

[**R4-2411829**](file:///D:\RAN4%23112\Docs\R4-2411829.zip) **(NR\_6GHz\_unlic\_EU-Core) CR for TS 38.101-1 on UE transmitter power for the Pcmax tolerance for NR unlicensed operation (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2398 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2411830**](file:///D:\RAN4%23112\Docs\R4-2411830.zip) **(NR\_6GHz\_unlic\_EU-Core) CR for TS 38.101-1 on UE transmitter power for the Pcmax tolerance for NR unlicensed operation (R18\_CAT\_A)**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2399 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#8**

[**R4-2411831**](file:///D:\RAN4%23112\Docs\R4-2411831.zip) **(NR\_CADC\_R17\_3BDL\_2BUL-Core) CR for TS 38.101-1 on UE configured power relaxation for special component bands (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2400 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

**#9**

[**R4-2411864**](file:///D:\RAN4%23112\Docs\R4-2411864.zip) **(NR\_RF\_FR1\_enh-Core) CR for TS 38.101-1: Corrections on intra-band UL contiguous CA with UL MIMO for PC3**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2404 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

**#10**

[**R4-2411890**](file:///D:\RAN4%23112\Docs\R4-2411890.zip) **CR on 38.101-1 Remove the superscript NOTE 1 for intra-band contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2406 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2411891**](file:///D:\RAN4%23112\Docs\R4-2411891.zip) **CR on 38.101-1 Remove the superscript NOTE 1 for intra-band contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2407 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#11**

[**R4-2411925**](file:///D:\RAN4%23112\Docs\R4-2411925.zip) **(NR\_n28\_BW-Core) Apply ?MPR to the total MOP reduction**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2408 rev Cat: F (Rel-16)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2411926**](file:///D:\RAN4%23112\Docs\R4-2411926.zip) **(NR\_n28\_BW-Core) Apply ?MPR to the total MOP reduction**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2409 rev Cat: A (Rel-17)  
  
 Source: ZTE Corporation, Sanechips*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2411927**](file:///D:\RAN4%23112\Docs\R4-2411927.zip) **(NR\_n28\_BW-Core) Apply ?MPR to the total MOP reduction**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2410 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#12**

[**R4-2412040**](file:///D:\RAN4%23112\Docs\R4-2412040.zip) **CR on typo for A-MPR of NR unlicensed band**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2416 rev Cat: F (Rel-16)  
  
 Source: LG Electronics*

**Abstract:**

It is CR on fixing of refered table number for NR unlicensed A-MPR in Rel-16

**Decision:** The document was **not treated**.

[**R4-2412043**](file:///D:\RAN4%23112\Docs\R4-2412043.zip) **CR on typo for A-MPR of NR unlicensed band (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2417 rev Cat: A (Rel-17)  
  
 Source: LG Electronics*

**Abstract:**

It is CR on fixing of reference table number for NR unlicensed A-MPR in Rel-17. MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2412044**](file:///D:\RAN4%23112\Docs\R4-2412044.zip) **CR on typo for A-MPR of NR unlicensed band (R18)**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2418 rev Cat: A (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is CR on fixing of reference table number for NR unlicensed A-MPR in Rel-18. MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#13**

[**R4-2412446**](file:///D:\RAN4%23112\Docs\R4-2412446.zip) **(NR\_newRAT-core) CR for TS 38.101-1 R15 correction on AMPR for NS\_10**

*Type: CR For: Agreement  
 38.101-1 v15.26.0 CR-2433 rev Cat: D (Rel-15)  
  
 Source: Spreadtrum Communications*

**Decision:** The document was **not treated**.

[**R4-2412447**](file:///D:\RAN4%23112\Docs\R4-2412447.zip) **(NR\_newRAT-core) CR for TS 38.101-1 R16 correction on AMPR for NS\_10**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2434 rev Cat: A (Rel-16)  
  
 Source: Spreadtrum Communications*

**Decision:** The document was **not treated**.

[**R4-2412448**](file:///D:\RAN4%23112\Docs\R4-2412448.zip) **(NR\_newRAT-core) CR for TS 38.101-1 R17 correction on AMPR for NS\_10**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2435 rev Cat: A (Rel-17)  
  
 Source: Spreadtrum Communications*

**Decision:** The document was **not treated**.

[**R4-2412449**](file:///D:\RAN4%23112\Docs\R4-2412449.zip) **(NR\_newRAT-core) CR for TS 38.101-1 R18 correction on AMPR for NS\_10**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2436 rev Cat: A (Rel-18)  
  
 Source: Spreadtrum Communications*

**Decision:** The document was **not treated**.

**#14**

[**R4-2412469**](file:///D:\RAN4%23112\Docs\R4-2412469.zip) **(TEI17) CR to correct the note 1 indication from NS\_05 to NS\_05U - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2438 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision:** The document was **not treated**.

[**R4-2412470**](file:///D:\RAN4%23112\Docs\R4-2412470.zip) **(TEI17) CR to correct the note 1 indication from NS\_05 to NS\_05U - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2439 rev Cat: A (Rel-18)  
  
 Source: Anritsu Limited*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#15**

[**R4-2412471**](file:///D:\RAN4%23112\Docs\R4-2412471.zip) **(5G\_V2X\_NRSL-Core) CR to correct the name of the feature "V2X con-current operation" to "V2X concurrent operation" - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2440 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

**Decision:** The document was **not treated**.

[**R4-2412472**](file:///D:\RAN4%23112\Docs\R4-2412472.zip) **(5G\_V2X\_NRSL-Core) CR to correct the name of the feature "V2X con-current operation" to "V2X concurrent operation" - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2441 rev Cat: A (Rel-17)  
  
 Source: Anritsu Limited*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2412473**](file:///D:\RAN4%23112\Docs\R4-2412473.zip) **(5G\_V2X\_NRSL-Core) CR to correct the name of the feature "V2X con-current operation" to "V2X concurrent operation" - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2442 rev Cat: A (Rel-18)  
  
 Source: Anritsu Limited*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#16**

[**R4-2412474**](file:///D:\RAN4%23112\Docs\R4-2412474.zip) **(TEI17) CR to modify MBW definition - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2443 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision:** The document was **not treated**.

[**R4-2412475**](file:///D:\RAN4%23112\Docs\R4-2412475.zip) **(TEI17) CR to modify MBW definition - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2444 rev Cat: A (Rel-18)  
  
 Source: Anritsu Limited*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#17**

[**R4-2412476**](file:///D:\RAN4%23112\Docs\R4-2412476.zip) **(TEI16) CR to correct (typo) of the definitions of the symbols Nrb\_agg - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2445 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

**Decision:** The document was **not treated**.

[**R4-2412477**](file:///D:\RAN4%23112\Docs\R4-2412477.zip) **(TEI16) CR to correct (typo) of the definitions of the symbols Nrb\_agg - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2446 rev Cat: A (Rel-17)  
  
 Source: Anritsu Limited*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2412478**](file:///D:\RAN4%23112\Docs\R4-2412478.zip) **(TEI16) CR to correct (typo) of the definitions of the symbols Nrb\_agg - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2447 rev Cat: A (Rel-18)  
  
 Source: Anritsu Limited*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#18**

[**R4-2412479**](file:///D:\RAN4%23112\Docs\R4-2412479.zip) **(NR\_newRAT-Core) CR to correct the definition of the symbol Nrb\_agg and two symbols on same line - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v15.26.0 CR-2448 rev Cat: F (Rel-15)  
  
 Source: Anritsu Limited*

**Decision:** The document was **not treated**.

**#20**

[**R4-2412564**](file:///D:\RAN4%23112\Docs\R4-2412564.zip) **Correction for value B for non-contiguous uplink carrier aggregation**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2450 rev Cat: F (Rel-16)  
  
 Source: LG Electronics*

**Abstract:**

Formula B is modified for both MPR and A-MPR to take into account that unit of SCS is Hz and no kHz and shall be as follows: B = (LCRB1\* 12\* SCS1 + LCRB2 \* 12 \* SCS2) / 1,000,000

**Decision:** The document was **not treated**.

[**R4-2412566**](file:///D:\RAN4%23112\Docs\R4-2412566.zip) **Correction for value B for non-contiguous uplink carrier aggregation**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2451 rev Cat: A (Rel-17)  
  
 Source: LG Electronics*

**Abstract:**

Formula B is modified for both MPR and A-MPR to take into account that unit of SCS is Hz and no kHz and shall be as follows: B = (LCRB1\* 12\* SCS1 + LCRB2 \* 12 \* SCS2) / 1,000,000

**Decision:** The document was **not treated**.

[**R4-2412567**](file:///D:\RAN4%23112\Docs\R4-2412567.zip) **Correction for value B for non-contiguous uplink carrier aggregation**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2452 rev Cat: A (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

Formula B is modified for both MPR and A-MPR to take into account that unit of SCS is Hz and no kHz and shall be as follows: B = (LCRB1\* 12\* SCS1 + LCRB2 \* 12 \* SCS2) / 1,000,000

**Decision:** The document was **not treated**.

**#21**

[**R4-2412946**](file:///D:\RAN4%23112\Docs\R4-2412946.zip) **(NR\_SUL\_combos\_R17-Core) CR for TS 38.101-1 to clarify the applicability for NUL carriers (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2462 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2412947**](file:///D:\RAN4%23112\Docs\R4-2412947.zip) **(NR\_SUL\_combos\_R17-Core) CR for TS 38.101-1 to clarify the applicability for NUL carriers (R18)**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2463 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#22**

[**R4-2413135**](file:///D:\RAN4%23112\Docs\R4-2413135.zip) **(NR\_n41\_BW-Core) CR to TS 38.101-1: NS\_47 correction**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2479 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Inc.*

**Decision:** The document was **not treated**.

[**R4-2413136**](file:///D:\RAN4%23112\Docs\R4-2413136.zip) **(NR\_n41\_BW-Core) CR to TS 38.101-1: NS\_47 correction**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2480 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2413137**](file:///D:\RAN4%23112\Docs\R4-2413137.zip) **(NR\_n41\_BW-Core) CR to TS 38.101-1: NS\_47 correction**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2481 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#23**

[**R4-2413152**](file:///D:\RAN4%23112\Docs\R4-2413152.zip) **(TEI) On missing BCS set definition for asymmetric FDD**

*Type: CR For: Agreement  
 38.101-1 v15.26.0 CR-2485 rev Cat: F (Rel-15)  
  
 Source: Apple*

**Decision:** The document was **not treated**.

**#24**

[**R4-2413153**](file:///D:\RAN4%23112\Docs\R4-2413153.zip) **(TEI) On missing BCS set definition for asymmetric TDD**

*Type: CR For: Agreement  
 38.101-1 v15.26.0 CR-2486 rev Cat: F (Rel-15)  
  
 Source: Apple*

**Decision:** The document was **not treated**.

[**R4-2413154**](file:///D:\RAN4%23112\Docs\R4-2413154.zip) **(TEI) On missing BCS set definition for asymmetric TDD**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2487 rev Cat: A (Rel-16)  
  
 Source: Apple*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2413155**](file:///D:\RAN4%23112\Docs\R4-2413155.zip) **(TEI) On missing BCS set definition for asymmetric TDD**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2488 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2413156**](file:///D:\RAN4%23112\Docs\R4-2413156.zip) **(TEI) On missing BCS set definition for asymmetric TDD**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2489 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#25**

[**R4-2413055**](file:///D:\RAN4%23112\Docs\R4-2413055.zip) **Cat F CR to TS 38.101-1 Rel-15 Power Class 4 clean-up**

*Type: CR For: Agreement  
 38.101-1 v15.26.0 CR-2473 rev Cat: F (Rel-15)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This CR replaces power "Class 4" with "Class 5" throughout several tables. Mirror CRs are proposed up to Release 18.6.0.

**Decision:** The document was **not treated**.

[**R4-2413057**](file:///D:\RAN4%23112\Docs\R4-2413057.zip) **Cat A CR to TS 38.101-1 Rel-16 Power Class 4 clean-up**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2474 rev Cat: A (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Mirror CR of [R4-2413055](file:///D:\RAN4%23112\Docs\R4-2413055.zip). MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2413058**](file:///D:\RAN4%23112\Docs\R4-2413058.zip) **Cat A CR to TS 38.101-1 Rel-17 Power Class 4 clean-up**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2475 rev Cat: A (Rel-17)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Mirror CR of [R4-2413055](file:///D:\RAN4%23112\Docs\R4-2413055.zip). MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2413059**](file:///D:\RAN4%23112\Docs\R4-2413059.zip) **Cat A CR to TS 38.101-1 Rel-18 Power Class 4 clean-up**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2476 rev Cat: A (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Mirror CR of [R4-2413055](file:///D:\RAN4%23112\Docs\R4-2413055.zip). MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#26 TEI**

[**R4-2413211**](file:///D:\RAN4%23112\Docs\R4-2413211.zip) **Rel-15 SUL configuration correction for REFSENS alignment with subsequent releases**

*Type: CR For: Agreement  
 38.101-1 v15.26.0 CR-2491 rev Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Decision:** The document was **not treated**.

**#27 TEI**

[**R4-2413241**](file:///D:\RAN4%23112\Docs\R4-2413241.zip) **(NR\_n14-Core, TEI16) Correction of notes for UE output power**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2494 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

As Note 6 in Table 6.2.1-1 has been reused for other bands in Rel-17/18, in this CR we provide corrections to the Note 6 wording to make it band-agnostic, while Band14-specific Note is introduced as a separate entry, i.e. Note 7. 3GPP drafting rules are implemented for the notes in Table 6.2.1-1.

**Decision:** The document was **not treated**.

[**R4-2413242**](file:///D:\RAN4%23112\Docs\R4-2413242.zip) **(NR\_n14-Core, TEI16) Correction of notes for UE output power**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2495 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: This is CAT A CR. As Note 6 in Table 6.2.1-1 has been reused for other bands in Rel-17/18, in this CR we provide corrections to the Note 6 wording to make it band-agnostic, while Band14-specific Note is introduced as a separate entry, i.e. Note 7. 3GPP drafting rules are implemented for the notes in Table 6.2.1-1.

**Decision:** The document was **not treated**.

**#28 TEI**

[**R4-2413243**](file:///D:\RAN4%23112\Docs\R4-2413243.zip) **(NR\_n14-Core, TEI16) Correction of notes for UE output power**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2496 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

As Note 6 in Table 6.2.1-1 has been reused for other bands in Rel-17/18, in this CR we provide corrections to the Note 6 wording to make it band-agnostic, while Band14-specific Note is introduced as a separate entry, i.e. Note 7. 3GPP drafting rules are implemented for the notes in Table 6.2.1-1.

**Decision:** The document was **not treated**.

**#29 TEI**

[**R4-2413334**](file:///D:\RAN4%23112\Docs\R4-2413334.zip) **(TEI15) CR to 38.101-1 Rel-15: Corrections of NR operating bands clause in FR1**

*Type: CR For: Agreement  
 38.101-1 v15.26.0 CR-2500 rev Cat: F (Rel-15)  
  
 Source: Ericsson India Private Limited*

**Abstract:**

This CR is a part of a series of CRs on corrections of NR operating bands clause in FR1.

**Decision:** The document was **not treated**.

**#30 TEI**

[**R4-2413351**](file:///D:\RAN4%23112\Docs\R4-2413351.zip) **(TEI16) CR to 38.101-1 Rel-16: Corrections of NR operating bands clause in FR1**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2501 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR is a part of a series of CRs on corrections of NR operating bands clause in FR1.

**Decision:** The document was **not treated**.

[**R4-2413354**](file:///D:\RAN4%23112\Docs\R4-2413354.zip) **(TEI17) CR to 38.101-1 Rel-17: Corrections of NR operating bands clause in FR1**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2502 rev Cat: F (Rel-17)  
  
 Source: Ericsson India Private Limited*

**Abstract:**

This CR is a resubmission of the endorsed CR in RAN4#111 [R4-2410709](file:///D:\RAN4%23112\Docs\R4-2410709.zip). It is a part of series of CRs on corrections of NR operating bands clause in FR1.

**Decision:** The document was **not treated**.

**CRs for 38.101-2 (1)**

[**R4-2412944**](file:///D:\RAN4%23112\Docs\R4-2412944.zip) **(NR\_redcap-Core) CR for TS 38.101-2 to modify the applicable maximum BW for PC7 RedCap UE (R17)**

*Type: CR For: Agreement  
 38.101-2 v17.14.0 CR-0756 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2412945**](file:///D:\RAN4%23112\Docs\R4-2412945.zip) **(NR\_redcap-Core) CR for TS 38.101-2 to modify the applicable maximum BW for PC7 RedCap UE (R18)**

*Type: CR For: Agreement  
 38.101-2 v18.6.0 CR-0757 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**CRs for 38.101-3 (5)**

**#1**

[**R4-2411160**](file:///D:\RAN4%23112\Docs\R4-2411160.zip) **(DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core, DC\_R17\_xBLTE\_2BNR\_yDL2UL) CR to introduce missing MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v17.14.0 CR-1263 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision:** The document was **not treated**.

[**R4-2411161**](file:///D:\RAN4%23112\Docs\R4-2411161.zip) **(DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core, DC\_R17\_xBLTE\_2BNR\_yDL2UL) CR to introduce missing MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1264 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#2**

[**R4-2411164**](file:///D:\RAN4%23112\Docs\R4-2411164.zip) **(ENDC\_UE\_PC2\_R17\_NR\_TDD-Core) CR for 38.101-3 to add general text descriptions on higher power class(es) applicability for higher order band combinations**

*Type: CR For: Agreement  
 38.101-3 v17.14.0 CR-1265 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision:** The document was **not treated**.

[**R4-2411165**](file:///D:\RAN4%23112\Docs\R4-2411165.zip) **(ENDC\_UE\_PC2\_R17\_NR\_TDD-Core) CR for 38.101-3 to add general text descriptions on higher power class(es) applicability for higher order band combinations**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1266 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#3**

[**R4-2412293**](file:///D:\RAN4%23112\Docs\R4-2412293.zip) **(DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core) CR to TS 38.101-3 Rel17 Removal of Unnecessary NE-DC Requirements**

*Type: CR For: Agreement  
 38.101-3 v17.14.0 CR-1280 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**#4**

[**R4-2412329**](file:///D:\RAN4%23112\Docs\R4-2412329.zip) **(DC\_R16\_1BLTE\_1BNR\_2DL2UL) CR to TS 38.101-3 Rel16 Removal of Unnecessary NE-DC Requirements**

*Type: CR For: Agreement  
 38.101-3 v16.20.0 CR-1281 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**#5**

[**R4-2413166**](file:///D:\RAN4%23112\Docs\R4-2413166.zip) **(ENDC\_UE\_PC2\_R17\_NR\_TDD-Core) CR 38.101-3 Clean up of power class indication for DC configurations**

*Type: CR For: Agreement  
 38.101-3 v17.14.0 CR-1298 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2413194**](file:///D:\RAN4%23112\Docs\R4-2413194.zip) **(ENDC\_UE\_PC2\_R17\_NR\_TDD-Core) CR 38.101-3 Clean up of power class indication for DC configurations**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1299 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**CRs for 38.101-5 (1)**

[**R4-2413129**](file:///D:\RAN4%23112\Docs\R4-2413129.zip) **(NR\_NTN\_solutions-Core) CR to TS 38.101-5: variable duplex distance**

*Type: CR For: Agreement  
 38.101-5 v17.8.0 CR-0120 rev Cat: F (Rel-17)  
  
 Source: Qualcomm Inc.*

**Decision:** The document was **not treated**.

[**R4-2413130**](file:///D:\RAN4%23112\Docs\R4-2413130.zip) **(NR\_NTN\_solutions-Core) CR to TS 38.101-5: variable duplex distance**

*Type: CR For: Agreement  
 38.101-5 v18.6.0 CR-0121 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**CRs for 36.101 (2)**

**#1**

[**R4-2412102**](file:///D:\RAN4%23112\Docs\R4-2412102.zip) **(NB\_IOT-Core)Discussion on SEM and MPR requirements correction for NB-Iot**

*Type: discussion For: Discussion  
 Source: vivo*

**Abstract:**

MCC: This was not made available at tdoc submission deadline.

**Decision: Withdrawn.**

CR

[**R4-2412103**](file:///D:\RAN4%23112\Docs\R4-2412103.zip) **(NB\_IOT-Core)Correct the MPR requirements for NB-Iot**

*Type: CR For: Agreement  
 36.101 v18.6.0 CR-6057 rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision:** The document was **not treated**.

**#2**

[**R4-2413132**](file:///D:\RAN4%23112\Docs\R4-2413132.zip) **(LTE\_CA\_R16\_intra-Core) CR to TS 36.101: B41 emissions**

*Type: CR For: Agreement  
 36.101 v16.20.0 CR-6064 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Inc.*

**Decision:** The document was **not treated**.

[**R4-2413133**](file:///D:\RAN4%23112\Docs\R4-2413133.zip) **(LTE\_CA\_R16\_intra-Core) CR to TS 36.101: B41 emissions**

*Type: CR For: Agreement  
 36.101 v17.13.0 CR-6065 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2413134**](file:///D:\RAN4%23112\Docs\R4-2413134.zip) **(LTE\_CA\_R16\_intra-Core) CR to TS 36.101: B41 emissions**

*Type: CR For: Agreement  
 36.101 v18.6.0 CR-6066 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**#3**

[**R4-2411992**](file:///D:\RAN4%23112\Docs\R4-2411992.zip) **LTE Band 88 REFSENS UL allocation is missing R17**

*Type: CR For: Agreement  
 36.101 v17.13.0 CR-6054 rev Cat: F (Rel-17)  
  
 Source: Nokia*

**Decision:** The document was **not treated**.

[**R4-2411993**](file:///D:\RAN4%23112\Docs\R4-2411993.zip) **LTE Band 88 REFSENS UL allocation is missing R18**

*Type: CR For: Agreement  
 36.101 v18.6.0 CR-6055 rev Cat: A (Rel-18)  
  
 Source: Nokia*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

**CRs for other spec (3)**

**#1**

[**R4-2413102**](file:///D:\RAN4%23112\Docs\R4-2413102.zip) **CR to TR 38.852: Clarification on PC1 Rx requirements for FRMCS operation in band n101**

*Type: CR For: Agreement  
 38.852 v17.4.0 CR-0014 rev Cat: F (Rel-17)  
  
 Source: Union Inter. Chemins de Fer, Huawei, HiSilicon*

**Abstract:**

Current version of the TR does not address the issue of the missing Rx characteristics for PC1 cab-radio.

In this CR we provide updates to clarify handling of Rx characteristics for PC1 cab-radio, as per ECC Decision (20)02.

**Decision:** The document was **not treated**.

**#2**

[**R4-2413239**](file:///D:\RAN4%23112\Docs\R4-2413239.zip) **(NR\_RAIL\_EU\_900MHz-Core, LTE\_NR\_HPUE\_FWVM\_R18-Core) Clarification on PC1 Rx requirements for FRMCS operation in band n100**

*Type: CR For: Agreement  
 38.853 v17.4.0 CR-0012 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon, UIC*

**Abstract:**

Current version of the TR does not address the issue of the missing Rx characteristics for PC1 cab-radio. In this CR we provide updates to clarify handling of Rx characteristics for PC1 cab-radio, as per ECC Decision (20)02.

**Decision:** The document was **not treated**.

**#3**

[**R4-2413323**](file:///D:\RAN4%23112\Docs\R4-2413323.zip) **(LTE410\_Europe\_PPDR-Core) Removal of FFS**

*Type: CR For: Agreement  
 36.762 v16.0.0 CR-0001 rev Cat: F (Rel-16)  
  
 Source: Huawei Technologies Sweden AB*

**Decision:** The document was **not treated**.

**Withdrawn**

[**R4-2411233**](file:///D:\RAN4%23112\Docs\R4-2411233.zip) **Clean up of power class indication for DC configurations**

*Type: CR For: Agreement  
 38.101-3 v17.14.0 CR-1267 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

[**R4-2412104**](file:///D:\RAN4%23112\Docs\R4-2412104.zip) **(NB\_IOT-Core)Correct the SEM requirements for NB-Iot**

*Type: CR For: Agreement  
 36.101 v13.25.0 CR-6058 rev Cat: F (Rel-13)  
  
 Source: vivo*

**Decision:** The document was **withdrawn**.

[**R4-2412105**](file:///D:\RAN4%23112\Docs\R4-2412105.zip) **(NB\_IOT-Core)Correct the SEM requirements for NB-Iot**

*Type: CR For: Agreement  
 36.101 v14.26.0 CR-6059 rev Cat: A (Rel-14)  
  
 Source: vivo*

**Decision:** The document was **withdrawn**.

[**R4-2412106**](file:///D:\RAN4%23112\Docs\R4-2412106.zip) **(NB\_IOT-Core)Correct the SEM requirements for NB-Iot**

*Type: CR For: Agreement  
 36.101 v15.23.0 CR-6060 rev Cat: A (Rel-15)  
  
 Source: vivo*

**Decision:** The document was **withdrawn**.

[**R4-2412107**](file:///D:\RAN4%23112\Docs\R4-2412107.zip) **(NB\_IOT-Core)Correct the SEM requirements for NB-Iot**

*Type: CR For: Agreement  
 36.101 v16.20.0 CR-6061 rev Cat: A (Rel-16)  
  
 Source: vivo*

**Decision:** The document was **withdrawn**.

[**R4-2412108**](file:///D:\RAN4%23112\Docs\R4-2412108.zip) **(NB\_IOT-Core)Correct the SEM requirements for NB-Iot**

*Type: CR For: Agreement  
 36.101 v17.13.0 CR-6062 rev Cat: A (Rel-17)  
  
 Source: vivo*

**Decision:** The document was **withdrawn**.

[**R4-2412109**](file:///D:\RAN4%23112\Docs\R4-2412109.zip) **(NB\_IOT-Core)Correct the SEM requirements for NB-Iot**

*Type: CR For: Agreement  
 36.101 v18.6.0 CR-6063 rev Cat: A (Rel-18)  
  
 Source: vivo*

**Decision:** The document was **withdrawn**.

[**R4-2412258**](file:///D:\RAN4%23112\Docs\R4-2412258.zip) **Correction for value B for non-contiguous uplink carrier aggregation**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2421 rev Cat: F (Rel-16)  
  
 Source: LG Electronics Finland*

**Abstract:**

Formula B is modified for both MPR and A-MPR to take into account that unit of SCS is Hz and no kHz and shall be as follows: B = (LCRB1\* 12\* SCS1 + LCRB2 \* 12 \* SCS2) / 1,000,000

**Decision:** The document was **withdrawn**.

[**R4-2412259**](file:///D:\RAN4%23112\Docs\R4-2412259.zip) **Correction for value B for non-contiguous uplink carrier aggregation**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2422 rev Cat: A (Rel-17)  
  
 Source: LG Electronics Finland*

**Abstract:**

Formula B is modified for both MPR and A-MPR to take into account that unit of SCS is Hz and no kHz and shall be as follows: B = (LCRB1\* 12\* SCS1 + LCRB2 \* 12 \* SCS2) / 1,000,000

**Decision:** The document was **withdrawn**.

[**R4-2412260**](file:///D:\RAN4%23112\Docs\R4-2412260.zip) **Correction for value B for non-contiguous uplink carrier aggregation**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2423 rev Cat: A (Rel-18)  
  
 Source: LG Electronics Finland*

**Abstract:**

Formula B is modified for both MPR and A-MPR to take into account that unit of SCS is Hz and no kHz and shall be as follows: B = (LCRB1\* 12\* SCS1 + LCRB2 \* 12 \* SCS2) / 1,000,000

**Decision:** The document was **withdrawn**.

[**R4-2413067**](file:///D:\RAN4%23112\Docs\R4-2413067.zip) **CR to TR 38.852: Clarification on PC1 Rx requirements for FRMCS operation in band n101**

*Type: CR For: Agreement  
 38.852 v17.4.0 CR-0013 rev Cat: F (Rel-17)  
  
 Source: Union Inter. Chemins de Fer*

**Abstract:**

Current version of the TR does not address the issue of the missing Rx characteristics for PC1 cab-radio.

In this CR we provide updates to clarify handling of Rx characteristics for PC1 cab-radio, as per ECC Decision (20)02.

**Decision:** The document was **withdrawn**.

[**R4-2413160**](file:///D:\RAN4%23112\Docs\R4-2413160.zip) **(ENDC\_UE\_PC2\_R17\_NR\_TDD-Core) CR 38.101-3 Clean up of power class indication for DC configurations**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2490 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

[**R4-2413261**](file:///D:\RAN4%23112\Docs\R4-2413261.zip) **(LTE410\_Europe\_PPDR-Core) Removal of FFS**

*Type: discussion For: Discussion  
 36.762 v CR- rev Cat: (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

During the work on NR\_bands\_n87\_n88, it was identified, that the Rel-16 TR 36.762 still includes unresolved FFS'. As technical work on this TR was concluded many years ago, those FFS' are remove, to avoid ambiguities when reuse that TR for Rel-19 analyses

**Decision:** The document was **withdrawn**.

### 4.3 BS RF requirements and BS conformance testing

### 4.4 UE/BS EMC requirements

### 4.5 RRM requirements

### 4.6 Demodulation and CSI requirements

### 4.7 OTA and TRP/TRS test aspects

### 4.8 Rel-15/16/17 TEI

[**R4-2412785**](file:///D:\RAN4%23112\Docs\R4-2412785.zip) **CR on introduction of new FR2 PC**

*Type: CR For: Agreement  
 38.101-2 v18.6.0 CR-0755 rev Cat: F (Rel-18)  
  
 Source: Huawei,HiSilicon*

**Decision:** The document was **withdrawn**.

## 5 Rel-18 maintenance for LTE and NR closed work items

The following guidance are provided for maintenance work under AI 4 ~ AI 5:

‒ For maintenance agenda AI 4 (Rel-15/16/17) and AI 5 (Rel-18), formal CRs are expected and multiple CRs per company in the lowest agenda are allowed. For tracking the changes easily, it expected that one batch of CRs (Cat-F/A/…) will just cover a single topic/WI rather than multiple topics/WIs and Cat-F CR with corresponding Cat-A CRs needs be submitted under the same agenda.

‒ When submitting contributions to AI 4, AI 5.2, AI 5.34, please add (WI\_code) in the beginning of titles for both discussion files and CRs to facilitate moderators and session chairs handling.

‒ When reserving the tdoc number, please use the correct WI code rather than simply using TEI and fill the column of “Related WIs” in your reservation spreadsheet. If you submit a draft CR with TEI as WI code, please inform session chair.

‒ For all the endorsed draft CRs in this bis meeting, please re-submit them in the next ordinary meeting.

‒ The contributions corresponding to incoming LS for Rel-15/16/17 are expected to be submitted in AI 9.

‒ The contributions corresponding to incoming LS for Rel-18/19 are expected to be submitted to (sub-) agenda dedicated to the individual WIs. If there is no dedicated agenda, please submit to AI 5.2 or AI 5.34 depending on whether it is spectrum related topic or non-spectrum related topic.

### 5.1 Moderator summary and conclusions (for sub-AIs under AI 5 without specific agenda for moderator summary)

[**R4-2412804**](file:///D:\RAN4%23112\Docs\R4-2412804.zip) **Topic summary for [112][102] R18\_UERF\_maintenance\_Part1**

*Type: other For: Information  
 Source: Moderator(Meta)*

**Abstract:**

Summary for AI 5.2, 5.3, 5.4, 5.5, 5.6, 5.9.1, 5.10.1, 5.12.1

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412805**](file:///D:\RAN4%23112\Docs\R4-2412805.zip) **Topic summary for [112][103] R18\_UERF\_maintenance\_Part2**

*Type: other For: Information  
 Source: Moderator(Huawei)*

**Abstract:**

Summary for AI 5.20.1, 5.21.1, 5.22.1, 5.34.1, 5.35

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412806**](file:///D:\RAN4%23112\Docs\R4-2412806.zip) **Topic summary for [112][104] NR\_LTE\_Rel-18\_feature\_list**

*Type: other For: Information  
 Source: Moderator(CMCC)*

**Abstract:**

Summary for AI 5.36

**Decision: Withdrawn.**

### 5.2 Spectrum related WI maintenance

**Sub-topic 1-1 NR NTN\_LS band**

[**R4-2411138**](file:///D:\RAN4%23112\Docs\R4-2411138.zip) **(NR\_NTN\_LSband-Core) Correction of NS\_05N in band n254**

*Type: CR For: Agreement  
 38.101-5 v18.6.0 CR-0102 rev Cat: F (Rel-18)  
  
 Source: Apple, Globalstar*

**Decision:** The document was **not treated**.

[**R4-2411139**](file:///D:\RAN4%23112\Docs\R4-2411139.zip) **(NR\_NTN\_LSband-Core) Correction of NS\_05N in band n254**

*Type: CR For: Agreement  
 38.741 v18.1.0 CR-0002 rev Cat: F (Rel-18)  
  
 Source: Apple, Globalstar*

**Decision:** The document was **not treated**.

**Sub-topic 1-2 Correction on NR FDD band\_ ULn28\_DLn75\_n76**

[**R4-2411221**](file:///D:\RAN4%23112\Docs\R4-2411221.zip) **(NR\_FDD\_ULn28\_DLn75\_n76) CR to 38.101-1 on Channel raster for Band n109**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2380 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

The uplink channel raster entries for band n109 is incorrect. The last number should be changed to 146600.

**Decision:** The document was **not treated**.

[**R4-2411222**](file:///D:\RAN4%23112\Docs\R4-2411222.zip) **(NR\_FDD\_ULn28\_DLn75\_n76) CR to 38.104 on Channel raster for Band n109**

*Type: CR For: Agreement  
 38.104 v18.6.0 CR-0648 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

The uplink channel raster entries for band n109 is incorrect. The last number should be changed to 146600.

**Decision:** The document was **not treated**.

[**R4-2413203**](file:///D:\RAN4%23112\Docs\R4-2413203.zip) **[NR\_FDD\_ULn28\_DLn75\_n76] CR to TS 38.141-1 with correction to co-existence requirement for Band n109**

*Type: CR For: Agreement  
 38.141-1 v18.6.0 CR-0470 rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision:** The document was **not treated**.

**Sub-topic 1-3 LTE\_NR DC band combinations**

[**R4-2411325**](file:///D:\RAN4%23112\Docs\R4-2411325.zip) **(DC\_R18\_2BLTE\_1BNR\_3DL2UL-Core) Rel-18 Cat F CR for TS 38.101-3 to add PC3 MSD**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1271 rev Cat: F (Rel-18)  
  
 Source: Samsung, KDDI Corporation*

**Decision:** The document was **not treated**.

[**R4-2411832**](file:///D:\RAN4%23112\Docs\R4-2411832.zip) **(DC\_R18\_1BLTE\_1BNR\_2DL2UL-Core) CR for TS 38.101-3 on uplink configurations for two bands EN-DC including FR2 (R18)**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1273 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2412047**](file:///D:\RAN4%23112\Docs\R4-2412047.zip) **(DC\_R18\_1BLTE\_1BNR\_yDL2UL) CR for TR 37.718-11-11: Update on terms, symbols and abbreviations**

*Type: CR For: Agreement  
 37.718-11-11 v18.0.0 CR-0001 rev Cat: F (Rel-18)  
  
 Source: CHTTL*

**Decision:** The document was **not treated**.

[**R4-2412347**](file:///D:\RAN4%23112\Docs\R4-2412347.zip) **( DC\_R18\_2BLTE\_1BNR\_3DL2UL) CR to TS 38.101-3 Rel18 Removal of Unnecessary NE-DC Requirements**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1282 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**Sub-topic 1-4 NR single carrier/NR CA band combinations UE**

[**R4-2411833**](file:///D:\RAN4%23112\Docs\R4-2411833.zip) **(NR\_CADC\_R18\_3BDL\_xBUL-Core) CR for TS 38.101-1 on UE configured power relaxation for special component bands (R18)**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2401 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2412374**](file:///D:\RAN4%23112\Docs\R4-2412374.zip) **CR 38.101-1 correcting the table for NR operating bands in FR1**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2425 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

Remove double definition of n100 and adding back the removed n102

**Decision:** The document was **not treated**.

[**R4-2412375**](file:///D:\RAN4%23112\Docs\R4-2412375.zip) **CR 38.101-1 correcting 2 bands NR CA configuration tables**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2426 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-1 correcting 2 bands NR CA configuration tables

**Decision:** The document was **not treated**.

[**R4-2412376**](file:///D:\RAN4%23112\Docs\R4-2412376.zip) **CR 38.101-3 correcting 2 bands NR CA configuration tables**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1283 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-3 correcting 2 bands NR CA configuration tables

**Decision:** The document was **not treated**.

[**R4-2412377**](file:///D:\RAN4%23112\Docs\R4-2412377.zip) **CR 38.101-1 correcting 3 bands NR CA configuration tables**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2427 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-1 correcting 3 bands NR CA configuration tables

**Decision:** The document was **not treated**.

[**R4-2412378**](file:///D:\RAN4%23112\Docs\R4-2412378.zip) **CR 38.101-3 correcting 3 bands NR CA configuration tables**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1284 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-3 correcting 3 bands NR CA configuration tables

**Decision:** The document was **not treated**.

[**R4-2412379**](file:///D:\RAN4%23112\Docs\R4-2412379.zip) **CR 38.101-1 correcting 4 bands NR CA configuration tables**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2428 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-1 correcting 4 bands NR CA configuration tables

**Decision:** The document was **not treated**.

[**R4-2412380**](file:///D:\RAN4%23112\Docs\R4-2412380.zip) **CR 38.101-3 correcting 4 bands NR CA configuration tables**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1285 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-3 correcting 4 bands NR CA configuration tables

**Decision:** The document was **not treated**.

[**R4-2412882**](file:///D:\RAN4%23112\Docs\R4-2412882.zip) **(NR\_CADC\_R18\_yBDL\_xBUL)draft CR for TS38.101-1 to clarify single UL configuration for NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2412883**](file:///D:\RAN4%23112\Docs\R4-2412883.zip) **(NR\_CADC\_R18\_yBDL\_xBUL)draft CR for TS38.101-2 to clarify single UL configuration for NR CA**

*Type: draftCR For: Endorsement  
 38.101-2 v18.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2412884**](file:///D:\RAN4%23112\Docs\R4-2412884.zip) **(NR\_CADC\_R18\_yBDL\_xBUL)draft CR for TS38.101-3 to clarify single UL configuration for NR CA**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2413053**](file:///D:\RAN4%23112\Docs\R4-2413053.zip) **CR to TS 38.101-1 Rel-18 Corrections to ACLR for CA\_NC\_NS\_100**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2472 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This CR introduces missing in-gap UTRA ACLR requirement for CA\_NC\_NS\_100.

Chair: There is no Cat A CRs submitted. So it should be endorsed only if agreeable.

**Decision:** The document was **not treated**.

[**R4-2413399**](file:///D:\RAN4%23112\Docs\R4-2413399.zip) **CR to R18 38101-1 to add 35MHz CBW to NS\_35 definition**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2505 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

adding missing 35MHz CBW to NS\_35 definition in NS table while emission requirement and A-MPR are already defined for 35MHz CBW. MCC: The author stated pre-meeting that there are no change marks in the CR. A revision will be required to address this issue.

**Decision:** The document was **not treated**.

**Sub-topic 1-5 IoT NTN\_FDD LS bands**

[**R4-2411542**](file:///D:\RAN4%23112\Docs\R4-2411542.zip) **(IoT\_NTN\_FDD\_LS\_band) CR to 36.102 for IoT-NTN UE RF requirements (Rel-18)**

*Type: CR For: Agreement  
 36.102 v18.5.0 CR-0038 rev Cat: D (Rel-18)  
  
 Source: Mediatek India Technology Pvt.*

**Decision:** The document was **not treated**.

[**R4-2411543**](file:///D:\RAN4%23112\Docs\R4-2411543.zip) **(IoT\_NTN\_FDD\_LS\_band) CR to 36.102 for IoT-NTN UE RF Multi-Tones A-MPR requirements (Rel-18)**

*Type: CR For: Agreement  
 36.102 v18.5.0 CR-0039 rev Cat: F (Rel-18)  
  
 Source: Mediatek India Technology Pvt.*

**Decision:** The document was **not treated**.

[**R4-2411544**](file:///D:\RAN4%23112\Docs\R4-2411544.zip) **(IoT\_NTN\_FDD\_LS\_band) CR to 36.102 for IoT-NTN UE RF 1-Tone A-MPR requirements (Rel-18)**

*Type: CR For: Agreement  
 36.102 v18.5.0 CR-0040 rev Cat: F (Rel-18)  
  
 Source: Mediatek India Technology Pvt.*

**Decision:** The document was **not treated**.

**Sub-topic 1-6 NR\_FR1\_lessthan\_5MHz\_BW**

[**R4-2411834**](file:///D:\RAN4%23112\Docs\R4-2411834.zip) **(NR\_FR1\_lessthan\_5MHz\_BW-Core) CR for TS 38.101-1 on narrow band blocking for 3MHz channel bandwidth**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2402 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2413212**](file:///D:\RAN4%23112\Docs\R4-2413212.zip) **3MHz channel bandwidth optional for frequency bands n31 and n72**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2492 rev Cat: F (Rel-18)  
  
 Source: Keysight Technologies UK Ltd, Nokia*

**Decision:** The document was **not treated**.

**Sub-topic 1-7 Correction on High power UE related Topics**

[**R4-2411928**](file:///D:\RAN4%23112\Docs\R4-2411928.zip) **(NR\_PC2\_CA\_R17\_2BDL\_2BUL) Remove superscript NOTE 6 for PC2 TDD-TDD inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2411 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2411929**](file:///D:\RAN4%23112\Docs\R4-2411929.zip) **(NR\_PC2\_CA\_R17\_2BDL\_2BUL) Remove superscript NOTE 6 for PC2 TDD-TDD inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2412 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2413128**](file:///D:\RAN4%23112\Docs\R4-2413128.zip) **( HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18 ) CR to TS 38.101-1 for missing HPUE TDD configurations**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2478 rev Cat: F (Rel-18)  
  
 Source: BT plc*

**Decision:** The document was **not treated**.

[**R4-2413150**](file:///D:\RAN4%23112\Docs\R4-2413150.zip) **( HPUE\_FR1\_FDD\_NR\_CADC\_R18 ) CR to TS 38.101-1 for missing HPUE FDD configurations**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2484 rev Cat: F (Rel-18)  
  
 Source: BT plc*

**Decision:** The document was **not treated**.

[**R4-2413294**](file:///D:\RAN4%23112\Docs\R4-2413294.zip) **(HPUE\_FR1\_FDD\_NR\_CADC\_R18-Core) CR for 38.850: Corrections for CA\_n71A-n77A PC2 n71**

*Type: CR For: Agreement  
 38.850 v18.0.0 CR-0001 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA*

**Decision:** The document was **not treated**.

[**R4-2413295**](file:///D:\RAN4%23112\Docs\R4-2413295.zip) **(HPUE\_FR1\_FDD\_NR\_CADC\_R18-Core) CR for 38.101-1: Corrections for CA\_n71A-n77A PC2 n71**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2497 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA*

**Decision:** The document was **not treated**.

[**R4-2413296**](file:///D:\RAN4%23112\Docs\R4-2413296.zip) **( HPUE\_NR\_FR1\_FDD) CR for 38.101-1 NS\_06 corrections**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2498 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA, AT&T, Huawei*

**Decision:** The document was **not treated**.

[**R4-2413297**](file:///D:\RAN4%23112\Docs\R4-2413297.zip) **(CA and HPUE) CR for 38.101-1: Various corrections for CA and HPUE**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2499 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA*

**Decision:** The document was **not treated**.

**Sub-topic 1-8 Adding ETSI TC RT in TS38.101-1**

[**R4-2411994**](file:///D:\RAN4%23112\Docs\R4-2411994.zip) **CR 38.101-1 addtion of ETSI TC RT based on ECC Decision(20)02 reference to NB blocking**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2413 rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision:** The document was **not treated**.

**Sub-topic 1-9 NR-U 6GHz unlicensed bands**

[**R4-2411995**](file:///D:\RAN4%23112\Docs\R4-2411995.zip) **CR 38.101-1 re-establishment of n102 operating band information**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2414 rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision:** The document was **not treated**.

**Sub-topic 1-10 Correction on REFSENS & MSD**

[**R4-2412613**](file:///D:\RAN4%23112\Docs\R4-2412613.zip) **About issue in current PC2 MSD specification**

*Type: other For: Approval  
 Source: Qualcomm France*

**Abstract:**

Reviewing the most recent version of 38.101-1 we found an issue in PC2 MSD which needs to be addressed.

**Decision: Noted.**

Again, I have already mentioned to Skyworks that RAN plenary did not like it when mirror CRs did not have the same WI Code as the CAT F CR. So, they may not pass approval in RAN#105. I will add note in 3GU that mirror CR uses different WI code that CAT F CR.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**R4-2413024**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_112/Docs/R4-2413024.zip) | Cat F CR to TS 38.101-1 Rel-15 REFSENS Corrections | Skyworks Solutions Inc. | Laurent Noel | CR | Agreement | 5.2 | **available** | [**Rel-15**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=190) | [**38.101-1**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3283) | [**TEI15**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750033) | F |
| R4-2413025 | Cat A CR to TS 38.101-1 Rel-16 REFSENS Corrections | Skyworks Solutions Inc. | Laurent Noel | CR | Agreement | 5.2 | reserved | [**Rel-16**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=191) | [**38.101-1**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3283) | [**TEI16**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=770050) | A |
| [**R4-2413032**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_112/Docs/R4-2413032.zip) | Cat F CR to TS 38.101-1 Rel-17 REFSENS Corrections | Skyworks Solutions Inc. | Laurent Noel | CR | Agreement | 5.2 | **available** | [**Rel-17**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=192) | [**38.101-1**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3283) | [**TEI17**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047) | F |
| [**R4-2413034**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_112/Docs/R4-2413034.zip) | Cat F CR to TS 38.101-1 Rel-18 REFSENS Corrections | Skyworks Solutions Inc. | Laurent Noel | CR | Agreement | 5.2 | **available** | [**Rel-18**](https://portal.3gpp.org/desktopmodules/Release/ReleaseDetails.aspx?releaseId=193) | [**38.101-1**](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3283) | NR\_newRAT-Core, NR\_FDD\_ULn28\_DLn75\_n76-Core | F |

CR

[**R4-2412625**](file:///D:\RAN4%23112\Docs\R4-2412625.zip) **CR Adding missing MSD for CA\_n2A-n66A and for CA\_n25A-n66A PC3**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2459 rev Cat: F (Rel-18)  
  
 Source: Qualcomm France*

**Abstract:**

Adding missing MSD. Respective R16 and R17 CR's were implemented, but for some reason [R4-2408848](file:///D:\RAN4%23112\Docs\R4-2408848.zip) was not implemented for R18

**Decision:** The document was **not treated**.

[**R4-2413024**](file:///D:\RAN4%23112\Docs\R4-2413024.zip) **Cat F CR to TS 38.101-1 Rel-15 REFSENS Corrections**

*Type: CR For: Agreement  
 38.101-1 v15.26.0 CR-2467 rev Cat: F (Rel-15)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This CR removes the SCS60kHz text for band n20 from Note 2.

**Decision:** The document was **not treated**.

[**R4-2413025**](file:///D:\RAN4%23112\Docs\R4-2413025.zip) **Cat A CR to TS 38.101-1 Rel-16 REFSENS Corrections**

*Type: CR For: Agreement  
 38.101-1 v16.20.0 CR-2468 rev Cat: A (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Mirror CR of Rel-15 Cat-F [R4-2413024](file:///D:\RAN4%23112\Docs\R4-2413024.zip). MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2413032**](file:///D:\RAN4%23112\Docs\R4-2413032.zip) **Cat F CR to TS 38.101-1 Rel-17 REFSENS Corrections**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2469 rev Cat: F (Rel-17)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This CR removes the SCS60kHz text for band n20 from Note 2 and removes brackets for band n66 UL configuration for 45MHz CBW.

**Decision:** The document was **not treated**.

[**R4-2413034**](file:///D:\RAN4%23112\Docs\R4-2413034.zip) **Cat F CR to TS 38.101-1 Rel-18 REFSENS Corrections**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2470 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This CR removes the SCS60kHz text for band n20 from Note 2, removes brackets for band n66 UL configuration for 45MHz CBW and restores the band n109 UL configuration to the correct cells.

**Decision:** The document was **not treated**.

[**R4-2413035**](file:///D:\RAN4%23112\Docs\R4-2413035.zip) **CR to TS 38.101-1 Rel-18 Intra-band CA REFSENS corrections**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2471 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc., T-Mobile USA, Murata Manufacturing Corp., Qualcomm Inc.*

**Abstract:**

This CR introduces the missing 1UL intra-band CA requirements and clarfies the PC3 vs PC2 REFSENS requirements.

**Decision:** The document was **not treated**.

[**R4-2413060**](file:///D:\RAN4%23112\Docs\R4-2413060.zip) **CR to TS 38.101-1 Rel-18 Dual-UL IMD corrections**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2477 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This CR corrects typos and missing dual-IMD PC3 and PC2 test points.

**Decision:** The document was **not treated**.

**Sub-topic 1-11 Correction on Rx Harmonic mixing related topics**

[**R4-2412620**](file:///D:\RAN4%23112\Docs\R4-2412620.zip) **About RX mixing clean-up**

*Type: other For: Approval  
 Source: Qualcomm France*

**Abstract:**

Considerations on remaining issues for Harmonic mixing clean-up are provided.

**Decision: Noted.**

[**R4-2413063**](file:///D:\RAN4%23112\Docs\R4-2413063.zip) **Companion to CR on harmonic MSD clean-up**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This papers explains the key changes to the UL harmonic MSD requirements captured in CRs [R4-2413019](file:///D:\RAN4%23112\Docs\R4-2413019.zip), [R4-2413022](file:///D:\RAN4%23112\Docs\R4-2413022.zip) and [R4-2413023](file:///D:\RAN4%23112\Docs\R4-2413023.zip).

**Decision: Noted.**

CR

[**R4-2412621**](file:///D:\RAN4%23112\Docs\R4-2412621.zip) **CR for EN-DC Harmonic Mixing clean-up PC3**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1293 rev Cat: F (Rel-18)  
  
 Source: Qualcomm France*

**Abstract:**

Clean-up

**Decision:** The document was **not treated**.

[**R4-2412622**](file:///D:\RAN4%23112\Docs\R4-2412622.zip) **CR for EN-DC Harmonic Mixing clean-up PC2**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1294 rev Cat: F (Rel-18)  
  
 Source: Qualcomm France*

**Abstract:**

Clean-up

**Decision:** The document was **not treated**.

[**R4-2412623**](file:///D:\RAN4%23112\Docs\R4-2412623.zip) **CR for NR CA Harmonic Mixing clean-up PC3 PC5**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2457 rev Cat: F (Rel-18)  
  
 Source: Qualcomm France*

**Abstract:**

Clean-up

**Decision:** The document was **not treated**.

[**R4-2412926**](file:///D:\RAN4%23112\Docs\R4-2412926.zip) **CR for NR CA Harmonic Mixing clean-up PC2 PC1.5**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2460 rev Cat: F (Rel-18)  
  
 Source: Qualcomm France*

**Decision:** The document was **not treated**.

[**R4-2413019**](file:///D:\RAN4%23112\Docs\R4-2413019.zip) **CR to TS 38.101-1 Rel-18 NR CA Uplink Harmonic clean-up PC3**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2465 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions, Inc.*

**Abstract:**

This CR cleans-up the PC3 UL Harmonic MSD test points.

**Decision:** The document was **not treated**.

[**R4-2413022**](file:///D:\RAN4%23112\Docs\R4-2413022.zip) **CR to TS 38.101-1 Rel-18 NR CA Uplink Harmonic clean-up PC2**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2466 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions, Inc.*

**Abstract:**

This CR cleans-up the PC2 UL Harmonic MSD test points.

**Decision:** The document was **not treated**.

[**R4-2413023**](file:///D:\RAN4%23112\Docs\R4-2413023.zip) **CR to TS 38.101-3 Rel-18 EN-DC Uplink Harmonic clean-up**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1296 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This CR cleans-up the EN-DC UL Harmonic MSD test points and ensures cross-alignment with the NR-CA test points.

**Decision:** The document was **not treated**.

**Withdrawn**

[**R4-2411048**](file:///D:\RAN4%23112\Docs\R4-2411048.zip) **CR to R18 38.101-1 to correct UL configuration table for n109**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2375 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

CR to correct the band n109 UL configuration table where cells are wrongly shift left

**Decision:** The document was **withdrawn**.

[**R4-2412624**](file:///D:\RAN4%23112\Docs\R4-2412624.zip) **CR for NR CA Harmonic Mixing clean-up PC2 PC1.5**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2458 rev Cat: F (Rel-18)  
  
 Source: Qualcomm France*

**Abstract:**

Clean-up

**Decision:** The document was **withdrawn**.

### 5.3 NR Channel raster enhancement

**Sub-topic 2-1 NR Channel raster enhancement in TN**

[**R4-2411140**](file:///D:\RAN4%23112\Docs\R4-2411140.zip) **Clarification for the enhanced channel raster and carrier aggregation**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2377 rev Cat: F (Rel-18)  
  
 Source: Apple, T-Mobile, Telus*

**Decision:** The document was **not treated**.

**Sub-topic 2-2 NR Channel raster enhancement for NTN**

[**R4-2411875**](file:///D:\RAN4%23112\Docs\R4-2411875.zip) **(NR\_channel\_raster\_enh-Core) CR to TS38.108 Supporting enhanced channel raster for band n254**

*Type: CR For: Agreement  
 38.108 v18.3.0 CR-0082 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

**Sub-topic 2-3 NR channel raster capability for RedCap**

[**R4-2413273**](file:///D:\RAN4%23112\Docs\R4-2413273.zip) **Redcap UE capability for enhanced channel raster**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2411944**](file:///D:\RAN4%23112\Docs\R4-2411944.zip) **Enhanced channel raster UE capability**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

LS

[**R4-2411670**](file:///D:\RAN4%23112\Docs\R4-2411670.zip) **Mandated support of the enhanced channel raster by RedCap UEs from Rel-17 (including Draft LS to RAN2)**

*Type: LS out For: Approval  
 to RAN2  
 Source: Ericsson*

**Abstract:**

In this contribution we propose that the enhanced channel raster is supported by all RedCap UEs from Rel-17, the only feasible solution to avoid performance degradation for all UEs in a cell wider than 20 MHz also supporting RedCap UEs. A draft LS to inform RAN2 to this end is also included. MCC: This was updated to LS out but it is a discussion paper with LS out attached. A formal LS out would be required.

**Decision:** The document was **not treated**.

**Withdrawn**

[**R4-2411863**](file:///D:\RAN4%23112\Docs\R4-2411863.zip) **(NR\_channel\_raster\_enh-Core) CR to TS38.108 Supporting enhanced channel raster for band n254**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2403 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **withdrawn**.

### 5.4 Low NR band 4Rx for handheld UE and 3Tx for inter-band UL CA and EN-DC

**Sub-topic 3-1 Correction on the configured Tx Power for 3Tx EN-DC UE**

[**R4-2412596**](file:///D:\RAN4%23112\Docs\R4-2412596.zip) **(4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC) Correction on configured output power of 3Tx EN-DC including UL MIMO and Tx diversity**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1290 rev Cat: F (Rel-18)  
  
 Source: CHTTL*

**Decision:** The document was **not treated**.

**Sub-topic 3-2 NR Power class indication of 3Tx EN-DC UE combinations**

[**R4-2413127**](file:///D:\RAN4%23112\Docs\R4-2413127.zip) **Clean up of power class indication for DC configurations**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1297 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**Withdrawn**

[**R4-2411234**](file:///D:\RAN4%23112\Docs\R4-2411234.zip) **R18 Cat-F CR 38.101-3 Correction of power class indication for DC configurations**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1268 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

### 5.5 NR Support for UAV

### 5.6 Enhanced LTE Support for UAV

### 5.7 Support of intra-band non-collocated EN-DC/NR-CA deployment

**The tdocs will be treated in [112][124] NonCol\_intraB\_ENDC\_NR\_CA**

[**R4-2411413**](file:///D:\RAN4%23112\Docs\R4-2411413.zip) **In-GAP blocker impact on type 2 UE reconfiguration**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**CR**

[**R4-2411996**](file:///D:\RAN4%23112\Docs\R4-2411996.zip) **CR 38.101-3 Clarifications for non-collocated requirements**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1276 rev Cat: F (Rel-18)  
  
 Source: Nokia, Samsung*

**Abstract:**

MCC: The WI code in database was updated to match the CR coversheet.

**Decision:** The document was **not treated**.

[**R4-2411997**](file:///D:\RAN4%23112\Docs\R4-2411997.zip) **CR 38.101-1 Clarifications for non-collocated requirements**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2415 rev Cat: F (Rel-18)  
  
 Source: Nokia, Samsung*

**Abstract:**

MCC: The database value for WI code was updated to match CR coversheet.

**Decision:** The document was **not treated**.

[**R4-2412142**](file:///D:\RAN4%23112\Docs\R4-2412142.zip) **Correction CR to intra-band non-collocated NRCA**

*Type: CR For: Agreement  
 38.133 v18.6.0 CR-4751 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** The document was **not treated**.

[**R4-2412382**](file:///D:\RAN4%23112\Docs\R4-2412382.zip) **(NonCol\_intraB\_ENDC\_NR\_CA-Core) CR on 38.101-1 v18.6.0 Specifying different intra-band non-contiguous CA UE capability types**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2429 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2412383**](file:///D:\RAN4%23112\Docs\R4-2412383.zip) **(NonCol\_intraB\_ENDC\_NR\_CA-Core) CR on 38.101-3 v18.6.0 Specifying different inter-band EN-DC operation with overlapping or partially overlapping DL bands UE capability types**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1286 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2413157**](file:///D:\RAN4%23112\Docs\R4-2413157.zip) **MTTD/MRTD requirement for type 2 UE**

*Type: CR For: Agreement  
 38.133 v18.6.0 CR-4913 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision:** The document was **not treated**.

### 5.8 Air-to-ground network for NR

#### 5.8.1 UE RF requirements

**Sub-topic 4-1 4Tx power degradation for SRS antenna switching**

[**R4-2413158**](file:///D:\RAN4%23112\Docs\R4-2413158.zip) **Discussion on ATG Tx requirements**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

CR

[**R4-2411412**](file:///D:\RAN4%23112\Docs\R4-2411412.zip) **(NR\_ATG-Core) CR for 38101-1 on ATG Rx RF requirements**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2385 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision:** The document was **not treated**.

[**R4-2412942**](file:///D:\RAN4%23112\Docs\R4-2412942.zip) **(NR\_ATG-Core) CR for TS 38.101-1 to clarify the Tx requirements definition for ATG UE**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2461 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

#### 5.8.2 BS RF requirements and conformance testing

#### 5.8.3 RRM core and performance requirements

#### 5.8.4 Demodulation performance requirements

### 5.9 Further RF requirements enhancement for NR and EN-DC in FR1

#### 5.9.1 UE RF requirements

**Sub-topic 4-1 4Tx power degradation for SRS antenna switching**

[**R4-2411235**](file:///D:\RAN4%23112\Docs\R4-2411235.zip) **Delta Ppowerclass and Delta TRxSRS for 4Tx**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Abstract:**

This contribution discusses issues raised in [[R4-2400341](file:///D:\RAN4%23112\Docs\R4-2400341.zip)] for ?PPowerClass and ?TRxSRS for 4Tx for SRS antenna switching based on an approved WF [[R4-2406590](file:///D:\RAN4%23112\Docs\R4-2406590.zip)].

Simply put, in order to take things a step beyond, we propose to follow an approach that we have taken for 2Tx.

**Decision: Noted.**

[**R4-2412089**](file:///D:\RAN4%23112\Docs\R4-2412089.zip) **On 4Tx power degradation for SRS antenna switching**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2413357**](file:///D:\RAN4%23112\Docs\R4-2413357.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) On DeltaP\_PowerClass for SRS AS for 4Tx**

*Type: discussion For: Discussion  
 Source: Ericsson India Private Limited*

**Decision: Noted.**

CR

[**R4-2411236**](file:///D:\RAN4%23112\Docs\R4-2411236.zip) **Introduction of Delta TRxSRS for 4Tx**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2381 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of Delta TRxSRS for 4Tx

**Decision:** The document was **not treated**.

[**R4-2413358**](file:///D:\RAN4%23112\Docs\R4-2413358.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) CR to 38.101 Rel-18: DeltaP\_PowerClass correction for SRS AS for 4Tx**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2504 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR on how to extend the definition of Delta\_PpowerClass for SRS AS for 4Tx.

**Decision:** The document was **not treated**.

#### 5.9.2 RRM performance requirements

#### 5.9.3 Demodulation and CSI requirements

### 5.10 NR RF requirements enhancement for FR2, Phase 3

#### 5.10.1 UE RF requirements

**Topic #5-1: Correction of MPR requirements for 256QAM**

[**R4-2411232**](file:///D:\RAN4%23112\Docs\R4-2411232.zip) **CR to TS 38.101-2: correction of MPR for 256QAM**

*Type: CR For: Agreement  
 38.101-2 v18.6.0 CR-0752 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

#### 5.10.2 BS demodulation requirements (UL 256QAM)

#### 5.10.3 Moderator summary and conclusions

### 5.11 NR support for dedicated spectrum less than 5MHz for FR1

#### 5.11.1 System parameter and UE RF requirements

**Tdocs are treated in [112][123] NR\_FR1\_5MHz\_BW\_Ph2**

**CR**

[**R4-2411186**](file:///D:\RAN4%23112\Docs\R4-2411186.zip) **(NR\_FR1\_lessthan\_5MHz\_BW) – CR to TS 38.101-5 : Reserved GSCN requested by RAN2**

*Type: CR For: Agreement  
 38.101-5 v18.6.0 CR-0104 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This CR add the reserved GSCN as agreed in last RAN4#111 based on RAN2 request (LS) for less than 5 MHz channel BW

**Decision:** The document was **not treated**.

[**R4-2411187**](file:///D:\RAN4%23112\Docs\R4-2411187.zip) **(NR\_FR1\_lessthan\_5MHz\_BW) – CR to TS 38.108 : Reserved GSCN requested by RAN2**

*Type: CR For: Agreement  
 38.108 v18.3.0 CR-0081 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This CR add the reserved GSCN as agreed in last RAN4#111 based on RAN2 request (LS) for less than 5 MHz channel BW

**Decision:** The document was **not treated**.

[**R4-2412426**](file:///D:\RAN4%23112\Docs\R4-2412426.zip) **(NR\_FR1\_lessthan\_5MHz\_BW-Core) CR on 38.307 Release independent reserved operating bands**

*Type: CR For: Agreement  
 38.307 v18.2.0 CR-0170 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

#### 5.11.2 BS RF requirements and conformance testing

#### 5.11.3 RRM core and performance requirements

#### 5.11.4 Demodulation performance requirements

#### 5.11.5 Moderator summary and conclusions

### 5.12 NB-IoT/eMTC core & perf. requirements for NTN

#### 5.12.1 UE RF requirements

**Topic #6-1: Correction on LTE NTN UE emission requirements**

[**R4-2412097**](file:///D:\RAN4%23112\Docs\R4-2412097.zip) **Refinements of arrangment of Additional SEM and additional spurious emission**

*Type: CR For: Agreement  
 36.102 v18.5.0 CR-0042 rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision:** The document was **not treated**.

[**R4-2413131**](file:///D:\RAN4%23112\Docs\R4-2413131.zip) **CR to TS 36.102: B255 emissions**

*Type: CR For: Agreement  
 36.102 v18.5.0 CR-0045 rev Cat: F (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision:** The document was **not treated**.

**Sub-topic 6-2 Correction on MOP and MPR Requirements in TS36.102**

[**R4-2412096**](file:///D:\RAN4%23112\Docs\R4-2412096.zip) **Correction of MOP requirements on sTTI for NTN Category M1**

*Type: CR For: Agreement  
 36.102 v18.5.0 CR-0041 rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision:** The document was **not treated**.

[**R4-2412098**](file:///D:\RAN4%23112\Docs\R4-2412098.zip) **Correct the MPR requirements for NTN Category NB1 and NB2**

*Type: CR For: Agreement  
 36.102 v18.5.0 CR-0043 rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision:** The document was **not treated**.

#### 5.12.2 SAN RF requirements and conformance testing

#### 5.12.3 RRM core and performance requirements

#### 5.12.4 Demodulation requirements

### 5.13 Requirement for NR FR2 multi-Rx chain DL reception

### 5.14 Even Further RRM enhancement for NR and MR-DC

### 5.15 Further enhancements on NR and MR-DC measurement gaps and measurements without gaps

### 5.16 Completion of specification support for bandwidth part operation without restriction in NR

### 5.17 Enhanced NR support for high speed train scenario in frequency range 2

### 5.18 Enhancement of Multiple Input Multiple Output Over-the-Air test methodology and requirements for NR UEs

### 5.19 NR demodulation performance evolution

### 5.20 Multi-carrier enhancements for NR

#### 5.20.1 UE RF requirements

**Sub-topic 1-1 Remaining issues of Multi-carrier enhancements**

[**R4-2412101**](file:///D:\RAN4%23112\Docs\R4-2412101.zip) **Some remaining issues of Multi-carrier enhancements**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

**Sub-topic 1-2 the corrections for the feature list of Rel-18 Tx switching**

[**R4-2412538**](file:///D:\RAN4%23112\Docs\R4-2412538.zip) **Corrections on the feature list of Rel-18 Tx switching**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

#### 5.20.2 RRM core and performance requirements

#### 5.20.3 Moderator summary and conclusions

### 5.21 Further NR coverage enhancements

#### 5.21.1 UE RF requirements

**Sub-topic 2-1 Remaining issues with Rel-18 coverage enhancement**

[**R4-2411156**](file:///D:\RAN4%23112\Docs\R4-2411156.zip) **(NR\_cov\_enh2-Core) On remaining issues with Rel-18 coverage enhancement**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

CR

[**R4-2411266**](file:///D:\RAN4%23112\Docs\R4-2411266.zip) **(NR\_cov\_enh2-Core) CR to 38.101-1: Clarification on receiver requirements for coverage enhancement**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2384 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision:** The document was **not treated**.

[**R4-2411267**](file:///D:\RAN4%23112\Docs\R4-2411267.zip) **(NR\_cov\_enh2-Core) CR to 38.101-3: Clarification on receiver requirements for coverage enhancement**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1269 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision:** The document was **not treated**.

[**R4-2411889**](file:///D:\RAN4%23112\Docs\R4-2411889.zip) **CR on 38.101-1 Update the IE names for coverage enhancement**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2405 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2412990**](file:///D:\RAN4%23112\Docs\R4-2412990.zip) **(NR\_cov\_enh2-Core) CR to 38.101-3 for powerr boosting feature supporting CA**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1295 rev Cat: F (Rel-18)  
  
 Source: Ericsson, Qualcomm, Intel*

**Decision:** The document was **not treated**.

[**R4-2412991**](file:///D:\RAN4%23112\Docs\R4-2412991.zip) **(NR\_cov\_enh2-Core) CR to 38.101-1 for power boosting feature supporting CA**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2464 rev Cat: F (Rel-18)  
  
 Source: Ericsson, Qualcomm, Intel, Huawei*

**Decision:** The document was **not treated**.

#### 5.21.2 BS demodulation performance requirements

#### 5.21.3 Moderator summary and conclusions

### 5.22 NR sidelink evolution

#### 5.22.1 UE RF requirements

**Sub-topic 3-1 CRs and TPs**

[**R4-2411079**](file:///D:\RAN4%23112\Docs\R4-2411079.zip) **CR for 38.101-1: Correction on the SL-U RB set and intra-cell guard band determination**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2376 rev Cat: F (Rel-18)  
  
 Source: CATT, CICTCI*

**Decision:** The document was **not treated**.

[**R4-2412045**](file:///D:\RAN4%23112\Docs\R4-2412045.zip) **CR on missing NS values for SL-U(R18)**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2419 rev Cat: F (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is CR on incorrect NS values for SL-U

**Decision:** The document was **not treated**.

#### 5.22.2 RRM core and performance requirements

#### 5.22.3 UE demodulation performance requirements

#### 5.22.4 Moderator summary and conclusions

### 5.23 NR NTN enhancement

### 5.24 Further NR mobility enhancements

### 5.25 Dual Tx/Rx Multi-SIM for NR

### 5.26 Enhanced NR Sidelink Relay

#### 5.26.1 RRM core and performance requirements

#### 5.26.2 Moderator summary and conclusions

### 5.27 NR MIMO evolution for downlink and uplink

### 5.28 Enhanced support of reduced capability NR devices

### 5.29 Network energy saving for NR

### 5.30 IoT (Internet of Things) NTN (non-terrestrial network) enhancements

### 5.31 NR Network-controlled Repeaters

### 5.32 Mobile IAB (Integrated Access and Backhaul) for NR

### 5.33 Enhancement of NR dynamic spectrum sharing

### 5.34 Other Rel-18 non-spectrum related WIs

#### 5.34.1 UE RF requirements

**Topic #4: Other Rel-18 non-spectrum related Wis**

CR

[**R4-2411660**](file:///D:\RAN4%23112\Docs\R4-2411660.zip) **[NR\_pos\_enh2-Core] CR to 38.101-1 on positioning IE correction**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2392 rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision:** The document was **not treated**.

[**R4-2412481**](file:///D:\RAN4%23112\Docs\R4-2412481.zip) **(5G\_V2X\_NRSL-Core) CR to add third level clause suffixes for V2X - TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2449 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

**Decision:** The document was **not treated**.

[**R4-2413240**](file:///D:\RAN4%23112\Docs\R4-2413240.zip) **(LTE\_NR\_HPUE\_FWVM\_R18-Core) Clarification on FRMCS PC1 applicability for bands n100 and n101**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2493 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon, UIC*

**Abstract:**

In this CR we introduce PC1-specific Note in Table 6.2.1-1 for RMR bands n100/n101, to clarify applicability of PC1 for FRMCS.

**Decision:** The document was **not treated**.

**Sub-topic 4-1: Draft LS to ETSI TC RT on missing receiver characteristics of the n100/n101 HPUE cab-radio based on ECC(20)02**

LS out

[**R4-2413245**](file:///D:\RAN4%23112\Docs\R4-2413245.zip) **Draft LS to ETSI TC RT on missing receiver characteristics of the n100/n101 HPUE cab-radio based on ECC(20)02**

*Type: LS out For: Approval  
 to ETSI TC RT  
 Source: Huawei, HiSilicon*

**Abstract:**

Draft LS to ETSI TC RT on Rx requirements for n100/n101 PC1 HPUE cab-radio.

**Decision:** The document was **not treated**.

#### 5.34.2 BS RF requirements

#### 5.34.3 RRM requirements

#### 5.34.4 Demodulation performance and CSI requirements

#### 5.34.5 OTA aspects

### 5.35 Rel-18 TEI

[MCC]: For TEI18 CAT B authors, please take a look at the guideline of TEI part from RAN4#112 meeting arrangements and guidelines document in reference to the TEI identifier needing to be present in the title of CR. If authors need assistance, please contact the Chair.

**Sub-topic 5-1 channel spacing for intra-band EN-DC**

[**R4-2412536**](file:///D:\RAN4%23112\Docs\R4-2412536.zip) **Discussion on the channel spacing for intra-band EN-DC**

*Type: discussion For: Discussion  
 38.101-3 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

CR

[**R4-2412606**](file:///D:\RAN4%23112\Docs\R4-2412606.zip) **(TEI18) R18 Cat-F CR 38.101-3 channel spacing for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1292 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**Sub-topic 5-2 feasibility of FR2 UEs with low EIRP**

[**R4-2412784**](file:///D:\RAN4%23112\Docs\R4-2412784.zip) **Discussion on introduction of new FR2 PC**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Abstract:**

MCC: Moderator would like to move [R4-2412784](file:///D:\RAN4%23112\Docs\R4-2412784.zip)/3064 from AI 4.8 to AI 5.35 and treat them in [103].

**Decision: Noted.**

[**R4-2413227**](file:///D:\RAN4%23112\Docs\R4-2413227.zip) **Discussion on feasibility of FR2 UEs with low EIRP**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Abstract:**

Emerging FR2 markets may have denser deployment and more use cases than current practice in North America.We investigate if new scenarios will be better served by a new UE power class.

**Decision: Noted.**

CR

[**R4-2413064**](file:///D:\RAN4%23112\Docs\R4-2413064.zip) **CR on introduction of new FR2 power class 8**

*Type: CR For: Agreement  
 38.101-2 v18.6.0 CR-0758 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: Moderator would like to move [R4-2412784](file:///D:\RAN4%23112\Docs\R4-2412784.zip)/3064 from AI 4.8 to AI 5.35 and treat them in [103].

[MCC]: Missing TEI identifier on the CR coversheet. CAT B CR TEI18.

**Decision:** The document was **not treated**.

**Sub-topic 5-3 Essential correction to NB-IoT NTN Carrier Frequency**

[**R4-2412461**](file:///D:\RAN4%23112\Docs\R4-2412461.zip) **Essential correction to NB-IoT NTN Carrier Frequency to avoid breaking of forward and backward compatibility**

*Type: discussion For: Discussion  
 Source: Inmarsat, Viasat*

**Decision: Noted.**

[**R4-2412444**](file:///D:\RAN4%23112\Docs\R4-2412444.zip) **Flexible TX-RX Separation for NR NTN FR1 bands**

*Type: discussion For: Discussion  
 Source: Inmarsat, Viasat*

**Abstract:**

MCC: This was not made available at tdoc submission deadline. If it is made available treat [R4-2412444](file:///D:\RAN4%23112\Docs\R4-2412444.zip) in email thread [103].

**Decision: Withdrawn.**

CR

[**R4-2412445**](file:///D:\RAN4%23112\Docs\R4-2412445.zip) **(LTE\_NBIoT\_eMTC\_NTN\_req-Core) CR to 36.102 In-band NB-IoT NTN deployment with NR**

*Type: CR For: Agreement  
 36.102 v18.5.0 CR-0044 rev Cat: F (Rel-18)  
  
 Source: Inmarsat, Viasat*

**Abstract:**

MCC: A revision is required due to parsing failure. Change request Work Item wrong on CR cover for TDoc [R4-2412445](file:///D:\RAN4%23112\Docs\R4-2412445.zip). Database value : LTE\_NBIoT\_eMTC\_NTN\_req-Core. CR cover value : TEI18.

**Decision:** The document was **not treated**.

[**R4-2412450**](file:///D:\RAN4%23112\Docs\R4-2412450.zip) **(LTE\_NBIoT\_eMTC\_NTN\_req-Core) CR to 36.108 In-band NB-IoT NTN deployment with NR**

*Type: CR For: Agreement  
 36.108 v18.6.0 CR-0027 rev Cat: F (Rel-18)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, EchoStar, Thales, Skyworks*

**Decision:** The document was **not treated**.

[**R4-2412443**](file:///D:\RAN4%23112\Docs\R4-2412443.zip) **(NR\_NTN\_solutions-Core) CR to 38.101-5 Flexible TX-RX Separation for NR NTN Bands from Rel-17**

*Type: CR For: Agreement  
 38.101-5 v17.8.0 CR-0110 rev Cat: F (Rel-17)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, EchoStar, Thales, Skyworks*

**Abstract:**

Treat [R4-2412440](file:///D:\RAN4%23112\Docs\R4-2412440.zip)/43/44 in email thread [103].

**Decision:** The document was **not treated**.

[**R4-2412440**](file:///D:\RAN4%23112\Docs\R4-2412440.zip) **(NR\_NTN\_solutions-Core) CR to 38.101-5 Flexible TX-RX Separation for NR NTN Bands from Rel-18**

*Type: CR For: Agreement  
 38.101-5 v18.6.0 CR-0109 rev Cat: A (Rel-18)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, EchoStar, Thales, Skyworks*

**Abstract:**

Treat [R4-2412440](file:///D:\RAN4%23112\Docs\R4-2412440.zip)/43/44 in email thread [103]. [MCC]: This is CR CAT A.

**Decision:** The document was **not treated**.

**Sub-topic 5-4 CRs and TPs**

[**R4-2412090**](file:///D:\RAN4%23112\Docs\R4-2412090.zip) **CR on 38.101-1 for cleanup of Delta\_powerclass related requirements for HPUE**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2420 rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision:** The document was **not treated**.

[**R4-2412091**](file:///D:\RAN4%23112\Docs\R4-2412091.zip) **CR on 38.101-3 for cleanup of Delta\_powerclass related requirements for HPUE**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1278 rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision:** The document was **not treated**.

[**R4-2413355**](file:///D:\RAN4%23112\Docs\R4-2413355.zip) **(TEI18) CR to 38.101-1 Rel-18: Corrections of NR operating bands clause in FR1**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2503 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This CR is a resubmission of the endorsed CR in RAN4#111 [R4-2409789](file:///D:\RAN4%23112\Docs\R4-2409789.zip). It is a part of series of CRs on corrections of NR operating bands clause in FR1.

**Decision:** The document was **not treated**.

**Withdrawn**

[**R4-2412537**](file:///D:\RAN4%23112\Docs\R4-2412537.zip) **CR to 38.101-3: Correction on the channel spacing for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1289 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

[**R4-2412598**](file:///D:\RAN4%23112\Docs\R4-2412598.zip) **CR to 38.101-3: Correction on the channel spacing for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1291 rev Cat: F (Rel-18)  
  
 Source: Huawei Device Co., Ltd*

**Decision:** The document was **withdrawn**.

### 5.36 Rel-18 feature list

## 6 Rel-18 on-going work items

### 6.1 Expanded and improved NR positioning

### 6.2 Enhancement of TRP and TRS requirements and test methodologies

## 7 Rel-19 on-going spectrum related work items for NR and LTE

### 7.1 Moderator summary and conclusions (for AI 6)

[**R4-2412807**](file:///D:\RAN4%23112\Docs\R4-2412807.zip) **Topic summary for [112][105] NR\_Baskets\_Part\_1**

*Type: other For: Information  
 Source: Moderator(Nokia)*

**Abstract:**

Summary for AI 7.2

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412808**](file:///D:\RAN4%23112\Docs\R4-2412808.zip) **Topic summary for [112][106] NR\_Baskets\_Part\_2**

*Type: other For: Information  
 Source: Moderator(Ericsson)*

**Abstract:**

Summary for AI 7.3

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412809**](file:///D:\RAN4%23112\Docs\R4-2412809.zip) **Topic summary for [112][107] LTE\_Baskets**

*Type: other For: Information  
 Source: Moderator(Huawei)*

**Abstract:**

Summary for AI 7.4

**Decision:** The document was **not treated**.

[**R4-2412810**](file:///D:\RAN4%23112\Docs\R4-2412810.zip) **Topic summary for [112][108] HPUE\_NR\_band**

*Type: other For: Information  
 Source: Moderator(CMCC)*

**Abstract:**

Summary for AI 7.5

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412811**](file:///D:\RAN4%23112\Docs\R4-2412811.zip) **Topic summary for [112][109] HPUE\_LTE\_band**

*Type: other For: Information  
 Source: Moderator(Nokia)*

**Abstract:**

Summary for AI 7.6

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412812**](file:///D:\RAN4%23112\Docs\R4-2412812.zip) **Topic summary for [112][110] HPUE\_Basket\_EN-DC**

*Type: other For: Information  
 Source: Moderator(China Unicom)*

**Abstract:**

Summary for AI 7.7

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412813**](file:///D:\RAN4%23112\Docs\R4-2412813.zip) **Topic summary for [112][111] HPUE\_Basket\_CADC\_SUL**

*Type: other For: Information  
 Source: Moderator(China Telecom)*

**Abstract:**

Summary for AI 7.8

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412814**](file:///D:\RAN4%23112\Docs\R4-2412814.zip) **Topic summary for [112][112] LTE\_NR\_Other\_basket**

*Type: other For: Information  
 Source: Moderator(Huawei)*

**Abstract:**

Summary for AI 7.9, 7.10, 7.11, 7.12

**Decision: Noted.**

**Miniutes and conlcusions in the first round**

Please refer to the following hyperlinks for detailed minutes:

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_112/Inbox/Drafts/%5B112%5D%5B100%5D%20Main%20Session/1.Monday/1.%5B112%5D_R4-2412814%20Topic%20summary%20for%20%5B112%5D%5B112%5D%20LTE_NR_Other_WI.docx>

The conclusions and agreements are as follows.

**Issue 4-2-1: Whether to add 3 MHz CBWs in the WID**

**Agreement:**

* RAN4 suggests to add optional 3MHz channel bandwidth to support single carrier operation in the basket WI “Adding channel bandwidth(s) support to existing NR bands and CA/ENDC combinations in REL-19”

**Newly allocated tdocs for approval**

[**R4-2414268**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414268.zip) **WF on simulatenous Rx-Tx for CA\_n40-n41**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Return to.**

[**R4-2414269**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414269.zip) **WF on downlink interruption for UL Tx switching**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Return to.**

[**R4-2412815**](file:///D:\RAN4%23112\Docs\R4-2412815.zip) **Topic summary for [112][113] NR\_LTE\_TN\_Bands**

*Type: other For: Information  
 Source: Moderator(Nokia)*

**Abstract:**

Summary for AI 7.13, 7.14, 7.15, 7.16. MCC: Moderator is changed from Moderator (China Telecom) to Moderator (Nokia).

**Decision: Noted.**

**Miniutes and conlcusions in the first round**

Please refer to the following hyperlinks for detailed minutes:

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_112/Inbox/Drafts/%5B112%5D%5B100%5D%20Main%20Session/1.Monday/2.%5B113%5D_R4-2412815%20Topic%20Summary%20%5B112%5D%5B113%5D.docx>

The conclusions and agreements are as follows.

**Topic #1: Introduction of the 1.4 GHz Band**

**Issue 1-1: Band number**

**Agreement:**

* Use band number n110.

**Issue 1-2: UE REFSENS**

**Agreement:**

* UE REFSENS is [-102.2] dBm

**Issue 1-4: Synchronization raster (range of GSCN)**

* Proposals
  + Option 1: 33802-33804 (Ericsson, ZTE, Sanechips)
  + Option 2: 33802-33806 (Nokia, MidWave Wireless)
* Recommended WF
  + Option 1

**Agreement:**

* Agree on Option 1.

**Topic #2: Introduction of LTE FDD band in 1800-1830 MHz for Canada**

**Issue 2-2: Band number**

**Agreement:**

* Use band number 111.

**Issue 2-3: System parameters**

**Agreement:**

* Agree on system parameters in R4-2411220 in principle.

**Topic #3: Introduction of NR bands n87 and n88**

**Issue 3-2: System parameters**

**Agreement:**

* Use the system parameters in R4-2411086 (CATT) and R4-2413107 (Nokia) as the starting point.
  + No need for enhanced channel raster

**Topic #4: Introduction of NR band n68**

**Issue 4-2: System parameters**

**Agreement:**

* Use system parameters in R4-2411900 and R4-2411946 as the starting point.

**Issue 4-3: UE RF simulations**

**Agreement:**

* Agree to perform simulations according to R4-2411633

**Newly allocated tdocs for approval**

[**R4-2414270**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414270.zip) **WF on introduction of the 1.4 GHz Band**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Return to.**

[**R4-2414271**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414271.zip) **WF on introduction of LTE FDD band in 1800-1830 MHz for Canada**

*Type: other For: Approval  
 Source: NOVAMINT*

**Decision: Return to.**

[**R4-2414272**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414272.zip) **WF on introduction of NR bands n87 and n88**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Return to.**

[**R4-2414273**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414273.zip) **WF on introduction of NR band n68**

*Type: other For: Approval  
 Source: Ericsson*

**Decision: Return to.**

[**R4-2412816**](file:///D:\RAN4%23112\Docs\R4-2412816.zip) **Topic summary for [112][114] NR\_IoT\_NTN\_Bands**

*Type: other For: Information  
 Source: Moderator(Inmarsat)*

**Abstract:**

Summary for AI 7.17, 7.18, 7.19

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412817**](file:///D:\RAN4%23112\Docs\R4-2412817.zip) **Topic summary for [112][115] NR\_n28\_PC2\_40MHz**

*Type: other For: Information  
 Source: Moderator(CMCC)*

**Abstract:**

Summary for AI 7.20

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

Please refer to the following hyperlinks for detailed minutes:

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_112/Inbox/Drafts/%5B112%5D%5B100%5D%20Main%20Session/1.Monday/3.%5B115%5D_R4-2412817.docx>

The conclusions and agreements are as follows.

**Topic #2: UE RF requirements**

**Issue 2-1-1: UE architecture assumption**

**Agreement:**

* No need to study the feasibility of UE architecture, companies are encouraged to provide analysis on RF requirements based on their own implementation.
* RAN4 RF requirements should accommodate different UE architecture assumption.
* FFS on whether single set of requirements for different UE architectures should be defined.

**Issue 2-1-2: A-MPR simulation assump**ti**on**

**Agreement:**

* Reuse Rel-18 A-MPR simulation assumption in this WI.

**Issue 2-2-1 PC2 RSD for 1Tx and 2Tx for BW<=30MHz**

**Agreement:**

* Define RSD requirements as following:

Table 1: Reference Sensitivity Degradation from PC3 to PC2 for FDD bands for single Tx

| Operating Band | 3  MHz (dB) | 5  MHz (dB) | 10  MHz (dB) | 15  MHz (dB) | 20  MHz (dB) | 25  MHz (dB) | 30 MHz (dB) | 35 MHz (dB) | 40  MHz (dB) | 45 MHz (dB) | 50  MHz (dB) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| n28 | 0.6 | 0.6 | 0.7 | 0.8 | 1.3 | 2.4 | 2.9 |  |  |  |  |

Table 2 Reference Sensitivity Degradation from PC3 to PC2 for FDD bands for dual Tx

| Operating Band | 3  MHz (dB) | 5  MHz (dB) | 10  MHz (dB) | 15  MHz (dB) | 20  MHz (dB) | 25  MHz (dB) | 30 MHz (dB) | 35 MHz (dB) | 40  MHz (dB) | 45 MHz (dB) | 50  MHz (dB) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| n28 | 1.1 | 1.1 | 1.1 | 1.3 | 3.0 | 6.6 | 7.9 |  |  |  |  |

**Issue 2-2-3 NS\_18 A-MPR for PC2 for BW<=30MHz**

**Agreement:**

* Reuse Rel-18 requirement for NS\_18.

**Issue 2-3-1 Uplink configuration for n28 REFSENS**

**Agreement:**

* Adopt the following UL configuration for 40MHz

| Operating band / SCS (kHz) / Channel bandwidth (MHz) / Duplex mode | | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Operating Band | SCS | 3 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 | Duplex Mode |
| n28 | 15 | 15 | 25 | 251 | 251 | 251 | 251 | 251 |  | 251 |  |  |  |  |  |  |  | FDD |
|  | 30 |  |  | 101 | 101 | 101 | 101 | 101 |  | 101 |  |  |  |  |  |  |  |  |
| Note 1: UL resource blocks shall be located as close as possible to the downlink operating band but confined within the transmission bandwidth configuration for the channel bandwidth (Table 5.3.2-1). | | | | | | | | | | | | | | | | | | |

**Newly allocated tdocs for approval**

[**R4-2414274**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414274.zip) **WF on introduction of PC2 and 40MHz CBW in NR band n28**

*Type: other For: Approval  
 Source: CMCC*

**Decision: Return to.**

**Withdrawn**

[**R4-2411592**](file:///D:\RAN4%23112\Docs\R4-2411592.zip) **Big CR on Introduction of completed R19 x(x<=6) DL y(y<=2) UL CA band combinations to TS 36.101**

*Type: CR For: Endorsement  
 36.101 v18.6.0 CR-6053 rev Cat: B (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19.

**Decision:** The document was **withdrawn**.

### 7.2 Rel-19 DC of x LTE band(s), y NR band(s) (x<=6) and single or two NR SUL bands

#### 7.2.1 Rapporteur input (WID/TR/big CR)

**TR skeleton**

[**R4-2411318**](file:///D:\RAN4%23112\Docs\R4-2411318.zip) **Draft TR sketelon 37.719-11-10**

*Type: draft TR For: Agreement  
 37.719-11-10 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Samsung*

**Decision:** The document was **not treated**.

[**R4-2412116**](file:///D:\RAN4%23112\Docs\R4-2412116.zip) **TR skeleton for TR 37.719-11-11 Rel-19 Dual Connectivity of EN-DC and NE-DC configurations consisting of 2 different bands downlink (DL) with 2 different bands uplink (UL) (1 LTE band and 1 NR band)**

*Type: draft TR For: Agreement  
 37.719-11-11 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: CHTTL*

**Decision:** The document was **not treated**.

[**R4-2412436**](file:///D:\RAN4%23112\Docs\R4-2412436.zip) **Skeleton TR37.719-21-11 v0.0.0 for DC\_R19\_xBLTE\_yBNR\_3DL2UL**

*Type: draft TR For: Agreement  
 37.719-21-11 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: LG Electronics Deutschland*

**Abstract:**

Skeleton TR37.719-21-11 v0.0.0 for DC\_R19\_xBLTE\_yBNR\_3DL2UL

**Decision:** The document was **not treated**.

[**R4-2412157**](file:///D:\RAN4%23112\Docs\R4-2412157.zip) **TR 37.719-11-11 v0.1.0 Rel-19 Dual Connectivity of EN-DC and NE-DC configurations consisting of 2 different bands downlink (DL) with 2 different bands uplink (UL) (1 LTE band and 1 NR band)**

*Type: draft TR For: Agreement  
 37.719-11-11 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: CHTTL*

**Abstract:**

MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

[**R4-2412438**](file:///D:\RAN4%23112\Docs\R4-2412438.zip) **TR37.719-21-11 v0.1.0 for DC\_R19\_xBLTE\_yBNR\_3DL2UL**

*Type: draft TR For: Agreement  
 37.719-21-11 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: LG Electronics Deutschland*

**Abstract:**

For email approval : TR37.719-21-11 v0.1.0 for DC\_R19\_xBLTE\_yBNR\_3DL2UL. MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**WID revision**

[**R4-2413335**](file:///D:\RAN4%23112\Docs\R4-2413335.zip) **Merged Excel for WID for DC\_R19\_xBLTE\_yBNR**

*Type: WID revised For: Endorsement  
 Source: Nokia*

**Abstract:**

Persentation of revised WID with merged Excel and WID revisions based on RAN secretary comments

**Decision:** The document was **not treated**.

[**R4-2413336**](file:///D:\RAN4%23112\Docs\R4-2413336.zip) **Revised WID for DC\_R19\_xBLTE\_yBNR**

*Type: WID revised For: Endorsement  
 Source: Nokia*

**Abstract:**

Inclusion of requests provided for RAN4#112. MCC: It is assumed this is for post-meeting endorsement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**Big CR**

[**R4-2412487**](file:///D:\RAN4%23112\Docs\R4-2412487.zip) **draft BigCR for DC\_R19\_xBLTE\_yBNR (OBJ-1 DC\_R19\_1BLTE\_1BNR\_2DL2UL)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: CHTTL*

**Abstract:**

MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2412483**](file:///D:\RAN4%23112\Docs\R4-2412483.zip) **BigCR for DC\_R19\_xBLTE\_yBNR (OBJ-2 DC\_R19\_xBLTE\_yBNR\_3DL2UL)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: LG Electronics Deutschland*

**Abstract:**

For email agreement : Draft BigCR for DC\_R19\_xBLTE\_yBNR (OBJ-2 DC\_R19\_xBLTE\_yBNR\_3DL2UL). MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2413364**](file:///D:\RAN4%23112\Docs\R4-2413364.zip) **BigCR for DC\_R19\_xBLTE\_yBNR (OBJ-3 DC\_R19\_xBLTE\_yBNR\_zDLqUL)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Abstract:**

To capture agreed combinations at RAN4#112. MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

**Withdrawn**

[**R4-2412442**](file:///D:\RAN4%23112\Docs\R4-2412442.zip) **BigCR for DC\_R19\_xBLTE\_yBNR (OBJ-2 DC\_R19\_xBLTE\_yBNR\_3DL2UL)**

*Type: CR For: Endorsement  
 38.101-3 v18.6.0 CR-1287 rev Cat: B (Rel-19)  
  
 Source: LG Electronics Deutschland*

**Abstract:**

For email approval : BigCR for DC\_R19\_xBLTE\_yBNR (OBJ-2 DC\_R19\_xBLTE\_yBNR\_3DL2UL). MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19.

**Decision:** The document was **withdrawn**.

[**R4-2412240**](file:///D:\RAN4%23112\Docs\R4-2412240.zip) **BigCR for DC\_R19\_xBLTE\_yBNR (OBJ-1 DC\_R19\_1BLTE\_1BNR\_2DL2UL)**

*Type: CR For: Endorsement  
 38.101-3 v18.6.0 CR-1279 rev Cat: B (Rel-19)  
  
 Source: CHTTL*

**Abstract:**

MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19.

**Decision:** The document was **withdrawn**.

[**R4-2413337**](file:///D:\RAN4%23112\Docs\R4-2413337.zip) **Big CR to introduce new combinations DC of x bands LTE inter-band CA (x345) and 1 NR band**

*Type: CR For: Agreement  
 38.101-3 v18.6.0 CR-1300 rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Abstract:**

To capture agreed combinations at RAN4#110bis and RAN4#111

**Decision:** The document was **withdrawn**.

#### 7.2.2 UE RF requirements for EN-DC and NE-DC of 2 DL with 2 UL (DC\_R19\_1BLTE\_1BNR\_2DL2UL)

[**R4-2411166**](file:///D:\RAN4%23112\Docs\R4-2411166.zip) **On DC\_3C\_n7B with UL DC\_3C\_n7B**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2411260**](file:///D:\RAN4%23112\Docs\R4-2411260.zip) **Test points for DC\_(n)8AA BCS0**

*Type: other For: Discussion  
 Source: Murata Manufacturing Co. Ltd*

**Decision: Noted.**

[**R4-2411319**](file:///D:\RAN4%23112\Docs\R4-2411319.zip) **Test points for DC\_(n)8AA BCS0**

*Type: discussion For: Discussion  
 Source: Murata Manufacturing Co. Ltd*

**Decision: Noted.**

[**R4-2413070**](file:///D:\RAN4%23112\Docs\R4-2413070.zip) **DC\_(n)8AA MSD**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This document discusses MSD test point selection for DC\_(n)8AA.

**Decision: Noted.**

#### 7.2.3 UE RF requirements for EN-DC and NE-DC of 2 LTE and 1 NR, or of 1 LTE and 2 NR (DC\_R19\_xBLTE\_yBNR\_3DL2UL)

[**R4-2411835**](file:///D:\RAN4%23112\Docs\R4-2411835.zip) **TP for TR 37.719-21-11 DC\_20-28\_n7**

*Type: pCR For: Approval  
 37.719-21-11 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2411836**](file:///D:\RAN4%23112\Docs\R4-2411836.zip) **Draft CR for TS 38.101-3 to introduce new BC for DC\_7-20\_n28**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2412542**](file:///D:\RAN4%23112\Docs\R4-2412542.zip) **TP to TR 37.719-21-11 DC\_1A-8A\_n41A**

*Type: pCR For: Approval  
 37.719-21-11 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

[**R4-2412543**](file:///D:\RAN4%23112\Docs\R4-2412543.zip) **TP to TR 37.719-21-11 DC\_8A\_n41A-n78A**

*Type: pCR For: Approval  
 37.719-21-11 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

[**R4-2412002**](file:///D:\RAN4%23112\Docs\R4-2412002.zip) **draftCR 38.101-3 Addition of UL configuration DC\_7C\_n28A**

*Type: CR For: Endorsementt  
 38.101-3 v18.6.0 CR-1277 rev Cat: B (Rel-18)  
  
 Source: Nokia, AMX*

**Abstract:**

MCC: A revision is required due to parsing failure. Change request number wrong on CR cover for TDoc [R4-2412002](file:///D:\RAN4%23112\Docs\R4-2412002.zip). Database value : 1277. CR cover value : . Release number wrong on CR cover for TDoc [R4-2412002](file:///D:\RAN4%23112\Docs\R4-2412002.zip). Database value : Rel-18. CR cover value : Rel-19. Change request Work Item wrong on CR cover for TDoc [R4-2412002](file:///D:\RAN4%23112\Docs\R4-2412002.zip). Database value : DC\_R19\_xBLTE\_yBNR-Core. CR cover value : DC\_R19\_xBLTE\_yBNR. This formal CR is to be treated as draftCR based on author feedback.

Chair: it should be moved to AI 7.2.3.

**Decision:** The document was **not treated**.

[**R4-2413348**](file:///D:\RAN4%23112\Docs\R4-2413348.zip) **Draft CR 38.101-3 to add new DC FR1+FR2 combinations of b40 b42 n257**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia, nbn*

*Chair: it should be moved to AI 7.2.3.*

**Decision:** The document was **not treated**.

#### 7.2.4 UE RF requirements for EN-DC and NE-DC of x LTE and y NR with total z DL bands and q UL bands (DC\_R19\_xBLTE\_yBNR\_zDLqUL)

[**R4-2411837**](file:///D:\RAN4%23112\Docs\R4-2411837.zip) **Draft CR for TS 38.101-3 to introduce new BC for DC\_1-3-7-20-28\_n78**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2412544**](file:///D:\RAN4%23112\Docs\R4-2412544.zip) **(DC\_R19\_xBLTE\_yBNR\_zDLqUL) draftCR to 38.101-3 to include EN-DC band combination**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2412938**](file:///D:\RAN4%23112\Docs\R4-2412938.zip) **Draft CR for TS 38.101-3 to introduce ENDC combos**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, KPN*

**Decision:** The document was **not treated**.

#### 7.2.5 UE RF requirements for EN-DC and NE-DC with one SUL and two SULs (DC\_R19\_LTE\_NR\_SUL\_combos)

### 7.3 Rel-19 NR CA/DC for x bands DL with y bands UL (x<7, y<3) and SUL/CA band combinations with a single SUL or two SUL cells

#### 7.3.1 Rapporteur input (WID/TR/big CR)

**TR skeleton**

[**R4-2411938**](file:///D:\RAN4%23112\Docs\R4-2411938.zip) **TR38.719-02-01 v0.0.0: TR skeleton**

*Type: draft TR For: Agreement  
 38.719-02-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: ZTE Corporation*

**Decision:** The document was **not treated**.

[**R4-2411825**](file:///D:\RAN4%23112\Docs\R4-2411825.zip) **TR template for Rel-19 NR inter-band CADC configurations including 3 bands DL with up to 2 bands UL v0.0.0**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Abstract:**

Objective: NR\_CADC\_R19\_3BDL\_xBUL

**Decision:** The document was **not treated**.

[**R4-2412929**](file:///D:\RAN4%23112\Docs\R4-2412929.zip) **TR skeleton for 38.719-00-00 v0.0.1**

*Type: draft TR For: Agreement  
 38.719-00-00 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2412362**](file:///D:\RAN4%23112\Docs\R4-2412362.zip) **TR 38.719-01-01 v0.1.0 NR\_CA\_R19\_Intra**

*Type: draft TR For: Agreement  
 38.719-01-01 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

TR 38.719-01-01 v0.1.0 NR\_CA\_R19\_Intra. MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

[**R4-2411939**](file:///D:\RAN4%23112\Docs\R4-2411939.zip) **TR38.719-02-01 v0.1.0: Rel-19 NR inter-band CA/DC configurations including inter band CA for 2 different bands DL with up to 2 different bands UL**

*Type: draft TR For: Agreement  
 38.719-02-01 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: ZTE Corporation*

**Abstract:**

MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

[**R4-2411826**](file:///D:\RAN4%23112\Docs\R4-2411826.zip) **TR 38.719-03-01 v0.1.0 on Rel-19 NR Inter-band CA DC configurations including inter band CA for 3 different bands DL with x different bands UL (x=1,2)**

*Type: draft TR For: Agreement  
 38.719-03-01 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: ZTE Corporation*

**Abstract:**

Objective: NR\_CADC\_R19\_3BDL\_xBUL. MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

[**R4-2412930**](file:///D:\RAN4%23112\Docs\R4-2412930.zip) **TR for 38.719-00-00 v0.1.0**

*Type: draft TR For: Agreement  
 38.719-00-00 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**WID revision**

[**R4-2412358**](file:///D:\RAN4%23112\Docs\R4-2412358.zip) **Merged WID based on the RAN#104 excel sheets approved in RP-241674 NR\_CADC\_SUL\_R19**

*Type: WID revised For: Endorsement  
 Source: Ericsson, ZTE, Huawei, HiSilicon*

**Abstract:**

The individual excel sheets from RAN#104 approved in RP-241674 are merged and presented for information. This merge will be used as a baseline for the Revised WID for email approval.

**Decision:** The document was **not treated**.

[**R4-2412359**](file:///D:\RAN4%23112\Docs\R4-2412359.zip) **Revised WID NR\_CADC\_SUL\_R19**

*Type: WID revised For: Endorsement  
 Source: Ericsson, ZTE, Huawei, HiSilicon*

**Abstract:**

Revised WID NR\_CADC\_SUL\_R19. MCC: It is assumed this is for post-meeting endorsement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**Big CR**

[**R4-2412360**](file:///D:\RAN4%23112\Docs\R4-2412360.zip) **draft big CR 38.101-1 new combinations Rel-19 NR Intra-band**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

draft big CR 38.101-1 new combinations Rel-19 NR Intra-band. MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2412361**](file:///D:\RAN4%23112\Docs\R4-2412361.zip) **draft big CR 38.101-2 new combinations Rel-19 NR Intra-band**

*Type: draftCR For: Endorsement  
 38.101-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

draft big CR 38.101-2 new combinations Rel-19 NR Intra-band. MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2411840**](file:///D:\RAN4%23112\Docs\R4-2411840.zip) **TS 38.101-1 big draftCR for NR\_CADC\_R19\_2BDL\_xBUL**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Abstract:**

MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2411841**](file:///D:\RAN4%23112\Docs\R4-2411841.zip) **TS 38.101-2 big draftCR for NR\_CADC\_R19\_2BDL\_xBUL**

*Type: draftCR For: Endorsement  
 38.101-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Abstract:**

MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2411940**](file:///D:\RAN4%23112\Docs\R4-2411940.zip) **TS 38.101-3 draft big CR for NR\_CADC\_R19\_2BDL\_xBUL**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation*

**Abstract:**

MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2412526**](file:///D:\RAN4%23112\Docs\R4-2412526.zip) **draft big CR 38.101-1 new combinations Rel-19 NR inter-band CA/DC configurations including inter band CA for y DL with x UL**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

draft big CR 38.101-1 new combinations Rel-19 NR inter-band CA/DC configurations including inter band CA for y DL with x UL. MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2412527**](file:///D:\RAN4%23112\Docs\R4-2412527.zip) **draft big CR 38.101-3 new combinations Rel-19 NR inter-band CA/DC configurations including inter band CA for y DL with x UL**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

draft big CR 38.101-3 new combinations Rel-19 NR inter-band CA/DC configurations including inter band CA for y DL with x UL. MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2412931**](file:///D:\RAN4%23112\Docs\R4-2412931.zip) **Draft Big CR on Introduction of completed SUL band combinations into TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

**Withdrawn**

[**R4-2411827**](file:///D:\RAN4%23112\Docs\R4-2411827.zip) **Big CR to reflect the completed NR inter-band CA DC combinations for 3 bands DL with up to 2 bands UL into TS 38.101-1**

*Type: CR For: Endorsement  
 38.101-1 v18.6.0 CR-2397 rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation*

**Abstract:**

Objective: NR\_CADC\_R19\_3BDL\_xBUL MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19. Since this was not submitted at submission deadline it can be withdrawn and a new "draft CR" tdoc can be assigned.

**Decision:** The document was **withdrawn**.

[**R4-2411828**](file:///D:\RAN4%23112\Docs\R4-2411828.zip) **Big CR to reflect the completed NR inter-band CA DC combinations for 3 bands DL with up to 2 bands UL into TS 38.101-3**

*Type: CR For: Endorsement  
 38.101-3 v18.6.0 CR-1272 rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation*

**Abstract:**

Objective: NR\_CADC\_R19\_3BDL\_xBUL. MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19. Since this was not submitted at submission deadline it can be withdrawn and a new "draft CR" tdoc can be assigned.

**Decision:** The document was **withdrawn**.

[**R4-2412458**](file:///D:\RAN4%23112\Docs\R4-2412458.zip) **draft big CR 38.101-1 new combinations Rel-19 NR inter-band CA/DC configurations including inter band CA for y DL with x UL**

*Type: CR For: Endorsement  
 38.101-1 v18.6.0 CR-2437 rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19.

**Decision:** The document was **withdrawn**.

[**R4-2412459**](file:///D:\RAN4%23112\Docs\R4-2412459.zip) **draft big CR 38.101-3 new combinations Rel-19 NR inter-band CA/DC configurations including inter band CA for y DL with x UL**

*Type: CR For: Endorsement  
 38.101-3 v18.6.0 CR-1288 rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19.

**Decision:** The document was **withdrawn**.

#### 7.3.2 UE RF requirements for NR intra-band CA combinations for x CC DL/y CC UL (NR\_CA\_R19\_Intra with/without UL-MIMO)

[**R4-2411459**](file:///D:\RAN4%23112\Docs\R4-2411459.zip) **draft CR 38.101-1 for adding intra-band NR CA BCS 4 and 5 configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, Verizon*

**Abstract:**

draft CR 38.101-1 for adding intra-band NR CA BCS 4 and 5 configurations

**Decision:** The document was **not treated**.

[**R4-2411932**](file:///D:\RAN4%23112\Docs\R4-2411932.zip) **TP for TR38.719-01-01\_CA\_n104C**

*Type: other For: Approval  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2411933**](file:///D:\RAN4%23112\Docs\R4-2411933.zip) **draft CR to TS 38.101-1:Introduction of CA\_n79C with UL MIMO**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2412940**](file:///D:\RAN4%23112\Docs\R4-2412940.zip) **Discussion on the reasonable UL RB configurations for intra-band UL CA**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412941**](file:///D:\RAN4%23112\Docs\R4-2412941.zip) **Draft CR for TS 38.101-1 to introduce the reasonable UL RB configurations for intra-band UL CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: F (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2413069**](file:///D:\RAN4%23112\Docs\R4-2413069.zip) **CA\_n5B BCS4/5 REFSENS**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

[**R4-2413233**](file:///D:\RAN4%23112\Docs\R4-2413233.zip) **On DL CA\_n66(2A) and CA\_n66(3A) with UL CA\_n66(2A)**

*Type: other For: Approval  
 Source: Skyworks Solutions Inc.*

**Abstract:**

There is a request to support CA\_n66(2A) or CA\_n66(3A) in DL with CA\_n66(2A) in UL. In this contribution, we provide some clarification on the request, the work related to UL CA\_n66(2A) and its preferred implementation.

**Decision: Noted.**

#### 7.3.3 UE RF requirements for NR inter-band CA/DC configurations including inter band CA for 2 DL with up to 2UL (NR\_CADC\_R19\_2BDL\_xBUL)

[**R4-2411077**](file:///D:\RAN4%23112\Docs\R4-2411077.zip) **Discussion on RF requirements for 2U/2D CA\_n5-n8**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411255**](file:///D:\RAN4%23112\Docs\R4-2411255.zip) **TP for TR 38.719-02-01: PC3 NR BCS4/5 inter-band CA**

*Type: pCR For: Approval  
 38.719-02-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Verizon, Skyworks, Qualcomm, Ericsson, Samsung*

**Decision:** The document was **not treated**.

[**R4-2411460**](file:///D:\RAN4%23112\Docs\R4-2411460.zip) **draft CR 38.101-1 for adding 2 bands NR CA BCS 4 and 5 configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, Verizon*

**Abstract:**

draft CR 38.101-1 for adding 2 bands NR CA BCS 4 and 5 configurations

**Decision:** The document was **not treated**.

[**R4-2411551**](file:///D:\RAN4%23112\Docs\R4-2411551.zip) **On intra-band ULCA interference versus single ULCC**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

After discussion in in RAN4#111 there was a consensus that revisiting intra-band ULCA related MSD framework would be better tackled within Rel-19 rather than changing things right at the end of Rel-18. In this contribution, further developing from our related contribution in RAN#111, we provide technical background on intra-band ULCA related MSD and its comparison with single CC cases.

**Decision: Noted.**

[**R4-2411738**](file:///D:\RAN4%23112\Docs\R4-2411738.zip) **Discussion on MSD requirements with intra-band contiguous UL CA**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411887**](file:///D:\RAN4%23112\Docs\R4-2411887.zip) **On MSD requirements with intra-band contiguous UL CA**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2411934**](file:///D:\RAN4%23112\Docs\R4-2411934.zip) **TP for TR38.719-02-01\_CA\_n3A-n104A**

*Type: other For: Approval  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2411935**](file:///D:\RAN4%23112\Docs\R4-2411935.zip) **TP for TR38.719-02-01\_CA\_n8A-n104A**

*Type: other For: Approval  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2411936**](file:///D:\RAN4%23112\Docs\R4-2411936.zip) **TP for TR38.719-02-01\_CA\_n41A-n104A**

*Type: other For: Approval  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2412369**](file:///D:\RAN4%23112\Docs\R4-2412369.zip) **TP to TR 38.719-02-01 adding CA\_n78(2A) UL to CA\_n26A-n78(2A) and CA\_n26(2A)-n78(2A) DL**

*Type: pCR For: Approval  
 38.719-02-01 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson, Telstra*

**Abstract:**

TP to TR 38.719-02-01 adding CA\_n78(2A) UL to CA\_n26A-n78(2A) and CA\_n26(2A)-n78(2A) DL

**Decision:** The document was **not treated**.

[**R4-2412370**](file:///D:\RAN4%23112\Docs\R4-2412370.zip) **draft CR 38.101-1 for adding BCS 4 and 5 and UL CA\_n78(2A) to 2 bands NR CA DL configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 38.101-1 for adding BCS 4 and 5 and UL CA\_n78(2A) to 2 bands NR CA DL configurations

**Decision:** The document was **not treated**.

[**R4-2412452**](file:///D:\RAN4%23112\Docs\R4-2412452.zip) **draft CR 38.101-3 to add new NR CADC 2BDL configurations including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, Rogers*

**Abstract:**

draft CR 38.101-3 to add new NR CADC 2BDL configurations including FR2

**Decision:** The document was **not treated**.

[**R4-2412453**](file:///D:\RAN4%23112\Docs\R4-2412453.zip) **draft CR 38.101-1 to add new NR 2BDL configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, T-Mobile USA*

**Abstract:**

draft CR 38.101-1 to add new NR 2BDL configurations

**Decision:** The document was **not treated**.

[**R4-2412456**](file:///D:\RAN4%23112\Docs\R4-2412456.zip) **draft CR 38.101-3 to add new NR CADC 2BDL configurations including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, T-Mobile USA*

**Abstract:**

draft CR 38.101-3 to add new NR CADC 2BDL configurations including FR2

**Decision:** The document was **not treated**.

[**R4-2412850**](file:///D:\RAN4%23112\Docs\R4-2412850.zip) **TP for TR 38719-02-01 CA\_n18A-n41A**

*Type: pCR For: Approval  
 38.719-02-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: KDDI Corporation*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

[**R4-2412932**](file:///D:\RAN4%23112\Docs\R4-2412932.zip) **Draft CR for TS 38.101-1 to introduce two-band inter-band CA with BCS4 and 5**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, Softbank*

**Decision:** The document was **not treated**.

[**R4-2412934**](file:///D:\RAN4%23112\Docs\R4-2412934.zip) **Discussion on MSD for CA\_n40A-n41C with intra-band UL CA\_n41C**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412935**](file:///D:\RAN4%23112\Docs\R4-2412935.zip) **Discussion on MSD for CA\_n41C-n79A with intra-band UL CA\_n41C**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413315**](file:///D:\RAN4%23112\Docs\R4-2413315.zip) **On intra-band ULCA interference versus single ULCC**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

There is a request to support CA\_n48-n77 in UL. In this contribution, given that those two bands are overlapping, we discuss what would be the consequences if NS\_27 applied.

**Decision: Noted.**

[**R4-2413341**](file:///D:\RAN4%23112\Docs\R4-2413341.zip) **Draft CR 38.101-1 to add new CA FR1 combinations of n3**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia, Etisalat*

**Decision:** The document was **not treated**.

[**R4-2413342**](file:///D:\RAN4%23112\Docs\R4-2413342.zip) **TP to TR 38.719-02-01 Addition of CA\_n1A-n71A**

*Type: pCR For: Approval  
 38.719-02-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia, Etisalat*

**Decision:** The document was **not treated**.

[**R4-2413343**](file:///D:\RAN4%23112\Docs\R4-2413343.zip) **TP to TR 38.719-02-01 Addition of CA\_n3A-n71A**

*Type: pCR For: Approval  
 38.719-02-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia, Etisalat*

**Decision:** The document was **not treated**.

[**R4-2413344**](file:///D:\RAN4%23112\Docs\R4-2413344.zip) **TP to TR 38.719-02-01 Uplink addition of CA\_n41A-n78C**

*Type: pCR For: Approval  
 38.719-02-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia, Etisalat*

**Decision:** The document was **not treated**.

[**R4-2413347**](file:///D:\RAN4%23112\Docs\R4-2413347.zip) **TP to TR 38.719-02-01 Addition of CA\_n20A\_n77A**

*Type: pCR For: Approval  
 38.719-02-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia, Mobility*

**Decision:** The document was **not treated**.

#### 7.3.4 UE RF requirements for NR inter-band CA/DC configurations including inter band CA for 3 DL with x UL (NR\_CADC\_R19\_3BDL\_xBUL)

[**R4-2411323**](file:///D:\RAN4%23112\Docs\R4-2411323.zip) **Draft CR for TS 38.101-1 to add BCS4 and 5 for PC3 three-band inter-band CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Samsung, Verizon*

**Decision:** The document was **not treated**.

[**R4-2411937**](file:///D:\RAN4%23112\Docs\R4-2411937.zip) **TP for TR38.719-03-01\_CA\_n28A-n41A/C-n79A/C**

*Type: other For: Approval  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2412371**](file:///D:\RAN4%23112\Docs\R4-2412371.zip) **draft CR 38.101-1 for adding BCS 4 and 5 and UL CA\_n78(2A) to 3 bands NR CA DL configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 38.101-1 for adding BCS 4 and 5 and UL CA\_n78(2A) to 3 bands NR CA DL configurations

**Decision:** The document was **not treated**.

[**R4-2412451**](file:///D:\RAN4%23112\Docs\R4-2412451.zip) **draft CR 38.101-3 to add new NR CADC 3BDL configurations including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, Rogers*

**Abstract:**

draft CR 38.101-3 to add new NR CADC 3BDL configurations including FR2

**Decision:** The document was **not treated**.

[**R4-2412454**](file:///D:\RAN4%23112\Docs\R4-2412454.zip) **draft CR 38.101-1 to add new NR 3BDL configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, T-Mobile USA*

**Abstract:**

draft CR 38.101-1 to add new NR 3BDL configurations

**Decision:** The document was **not treated**.

[**R4-2412457**](file:///D:\RAN4%23112\Docs\R4-2412457.zip) **TP for 38.719-03-01 to add UL CA\_n41C-n71A and CA\_n41C-n66A for CA\_n41C-n66-n71A**

*Type: draftCR For: Endorsement  
 38.719-03-01 v0.1.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, T-Mobile USA*

**Abstract:**

TP for 38.719-03-01 to add UL CA\_n41C-n71A and CA\_n41C-n66A for CA\_n41C-n66-n71A

**Decision:** The document was **withdrawn**.

[**R4-2412885**](file:///D:\RAN4%23112\Docs\R4-2412885.zip) **TP to TR 38.719-03-01 include CA\_n8A-n20A-n75A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, DT*

**Decision:** The document was **not treated**.

[**R4-2412886**](file:///D:\RAN4%23112\Docs\R4-2412886.zip) **TP to TR 38.719-03-01 include CA\_n8A-n28A-n75A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, DT*

**Decision:** The document was **not treated**.

[**R4-2412887**](file:///D:\RAN4%23112\Docs\R4-2412887.zip) **TP to TR 38.719-03-01 include CA\_n20A-n28A-n75A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, DT*

**Decision:** The document was **not treated**.

[**R4-2412888**](file:///D:\RAN4%23112\Docs\R4-2412888.zip) **TP to TR 38.719-03-01 include CA\_n3A-n7A-n75A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, DT*

**Decision:** The document was **not treated**.

[**R4-2412889**](file:///D:\RAN4%23112\Docs\R4-2412889.zip) **TP to TR 38.719-03-01 include CA\_n3A-n75A-n78A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, DT*

**Decision:** The document was **not treated**.

[**R4-2412890**](file:///D:\RAN4%23112\Docs\R4-2412890.zip) **TP to TR 38.719-03-01 include CA\_n7A-n75A-n78A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, DT*

**Decision:** The document was **not treated**.

[**R4-2412891**](file:///D:\RAN4%23112\Docs\R4-2412891.zip) **TP to TR 38.719-03-01 include CA\_n1A-n7A-n75A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, DT*

**Decision:** The document was **not treated**.

[**R4-2412892**](file:///D:\RAN4%23112\Docs\R4-2412892.zip) **TP to TR 38.719-03-01 include CA\_n1A-n3A-n7A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, DT*

**Decision:** The document was **not treated**.

[**R4-2412933**](file:///D:\RAN4%23112\Docs\R4-2412933.zip) **Draft CR for TS 38.101-1 to introduceCA\_n3A-n8A-n39A-n41A/CA\_n3A-n8A-n39A-n79A/CA\_n3A-n39A-n41A-n79A/CA\_n3A-n8A-n39A-n41A-n79A**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon, CMCC*

**Decision:** The document was **not treated**.

[**R4-2413316**](file:///D:\RAN4%23112\Docs\R4-2413316.zip) **TP for 38.719-03-01 to add UL CA\_n41C-n71A and CA\_n41C-n66A for CA\_n41C-n66-n71A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson, T-Mobile USA*

**Abstract:**

TP for 38.719-03-01 to add UL CA\_n41C-n71A and CA\_n41C-n66A for CA\_n41C-n66-n71A. MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

[**R4-2413345**](file:///D:\RAN4%23112\Docs\R4-2413345.zip) **TP to TR 38.719-03-01 Addition of CA\_n1A-n41A-n78A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia, Etisalat*

**Decision:** The document was **not treated**.

[**R4-2413349**](file:///D:\RAN4%23112\Docs\R4-2413349.zip) **TP to TR 38.719-03-01 Addition of CA\_n1A-n5A-n8A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia*

**Decision:** The document was **not treated**.

[**R4-2413350**](file:///D:\RAN4%23112\Docs\R4-2413350.zip) **TP to TR 38.719-03-01 Addition of CA\_n3A-n5A-n8A**

*Type: pCR For: Approval  
 38.719-03-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia*

**Decision:** The document was **not treated**.

#### 7.3.5 UE RF requirements for NR inter-band CA/DC configurations including inter band CA for y DL with x UL (NR\_CADC\_R19\_yBDL\_xBUL)

[**R4-2411552**](file:///D:\RAN4%23112\Docs\R4-2411552.zip) **draft CR 38.101-1 for adding 4 and 5 bands NR CA BCS 4 and 5 configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Verizon, Ericsson, Samsung*

**Decision:** The document was **not treated**.

[**R4-2412372**](file:///D:\RAN4%23112\Docs\R4-2412372.zip) **draft CR 38.101-1 for adding BCS 4 and 5 and UL CA\_n78(2A) to 4 and 5 bands NR CA DL configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 38.101-1 for adding BCS 4 and 5 and UL CA\_n78(2A) to 4 and 5 bands NR CA DL configurations

**Decision:** The document was **not treated**.

[**R4-2412455**](file:///D:\RAN4%23112\Docs\R4-2412455.zip) **draft CR 38.101-1 to add new NR 4BDL configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, T-Mobile USA*

**Abstract:**

draft CR 38.101-1 to add new NR 4BDL configurations

**Decision:** The document was **not treated**.

[**R4-2413346**](file:///D:\RAN4%23112\Docs\R4-2413346.zip) **Draft CR 38.101-1 to add new 4-band CA combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia, STC*

*Chair: it should be moved to AI 7.3.5.*

**Decision:** The document was **not treated**.

#### 7.3.6 UE RF requirements for SUL and CA band combinations with SULs (NR\_SUL\_combos\_R19)

[**R4-2412936**](file:///D:\RAN4%23112\Docs\R4-2412936.zip) **TP for TR 38.719-00-00 on introduction of CA\_n1A-n3A\_n78A-n80A**

*Type: pCR For: Approval  
 38.719-00-00 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.1.

**Decision:** The document was **not treated**.

[**R4-2412937**](file:///D:\RAN4%23112\Docs\R4-2412937.zip) **TP for TR 38.719-00-00 on introduction of CA\_n1A-n3A\_n78A-n84A**

*Type: pCR For: Approval  
 38.719-00-00 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.1.

**Decision:** The document was **not treated**.

### 7.4 Rel-19 LTE-Advanced Carrier Aggregation for x bands (x<= 6) DL with y bands (y=1, 2) UL

#### 7.4.1 Rapporteur input (WID/TR/big CR)

**TR Skeleton**

[**R4-2411593**](file:///D:\RAN4%23112\Docs\R4-2411593.zip) **TR 36.719-01-01 LTE-A CA for x(x=123456) DL y(y=12) UL**

*Type: draft TR For: Agreement  
 36.719-01-01 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

Moderator: the Agenda Item is changed from 7.1 to 7.4.1

**Decision:** The document was **not treated**.

**WID revision**

[**R4-2411594**](file:///D:\RAN4%23112\Docs\R4-2411594.zip) **Revised WID Rel-19 LTE-A CA for x(x=123456) DL y(y=2) UL**

*Type: WID revised For: Endorsement  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: It is assumed this is for post-meeting endorsement. [Post-Meeting]

Moderator: the Agenda Item is changed from 7.1 to 7.4.1

**Decision:** The document was **for email approval**.

**Big CR**

[**R4-2412273**](file:///D:\RAN4%23112\Docs\R4-2412273.zip) **Draft Big CR on Introduction of completed R19 x(x<=6) DL y(y<=2) UL CA band combinations to TS 36.101**

*Type: draftCR For: Endorsement  
 36.101 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

Moderator: the Agenda Item is changed from 7.1 to 7.4.1

**Decision:** The document was **for email approval**.

#### 7.4.2 UE RF requirements

[**R4-2412016**](file:///D:\RAN4%23112\Docs\R4-2412016.zip) **draft CR for CA\_3-3-7-7-8 related combo with UL CA\_8B**

*Type: draftCR For: Endorsement  
 36.101 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: CHTTL*

**Decision:** The document was **not treated**.

### 7.5 Rel-19 HPUE for NR FR1 TDD/FDD single band

#### 7.5.1 Rapporteur input (WID/TR/big CR)

**TR skeleton**

[**R4-2411280**](file:///D:\RAN4%23112\Docs\R4-2411280.zip) **TR skeleton for TR38.796**

*Type: draft TR For: Agreement  
 38.796 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: China Unicom*

**Decision:** The document was **not treated**.

[**R4-2411725**](file:///D:\RAN4%23112\Docs\R4-2411725.zip) **TR skeleton 38.795 v0.0.1\_R19 HPUE NR TDD single band**

*Type: other For: Approval  
 Source: CMCC*

**Decision:** The document was **not treated**.

[**R4-2411285**](file:///D:\RAN4%23112\Docs\R4-2411285.zip) **TR 38.796 v0.1.0 HPUE\_NR\_FR1\_bands\_R19-FDD**

*Type: draft TR For: Agreement  
 38.796 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: China Unicom*

**Abstract:**

MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

#### 7.5.2 HPUE in a single TDD band

##### 7.5.2.1 UE RF requirements for PC2 and PC1.5

[**R4-2411739**](file:///D:\RAN4%23112\Docs\R4-2411739.zip) **(HPUE\_NR\_FR1\_bands\_R19-Core) Draft CR for 38.101-1 to introduce PC1.5 n104**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: CMCC*

**Decision:** The document was **not treated**.

##### 7.5.2.2 UE RF requirements for PC1 FWVM

#### 7.5.3 HPUE in a single FDD band

##### 7.5.3.1 UE RF requirements for PC2

##### 7.5.3.2 UE RF requirements for PC1 FWVM

### 7.6 Rel-19 HPUE in a single LTE band

#### 7.6.1 Rapporteur input (WID/TR/big CR)

**TR skeleton**

[**R4-2412003**](file:///D:\RAN4%23112\Docs\R4-2412003.zip) **TR 36.767 V0.0.0**

*Type: draft TR For: Agreement  
 36.767 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia*

**Decision:** The document was **not treated**.

[**R4-2412004**](file:///D:\RAN4%23112\Docs\R4-2412004.zip) **TR 36.767 V0.0.1**

*Type: draft TR For: Agreement  
 36.767 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Nokia*

**Abstract:**

MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**WID revision**

[**R4-2412005**](file:///D:\RAN4%23112\Docs\R4-2412005.zip) **Revised WID Rel-19 High power UE (power class 2) and high power operation (power class 1) for fixed-wireless/vehicle-mounted use cases in a single LTE band**

*Type: WID revised For: Endorsement  
 Source: Nokia*

**Abstract:**

MCC: It is assumed this is for post-meeting endorsement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**Big CR**

[**R4-2412006**](file:///D:\RAN4%23112\Docs\R4-2412006.zip) **Big CR for Rel-19 High power UE (power class 2) and high power operation (power class 1) for fixed-wireless/vehicle-mounted use cases in a single LTE band**

*Type: CR For: Endorsement  
 36.101 v18.6.0 CR-6056 rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Abstract:**

MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19.

**Decision:** The document was **for email approval**.

#### 7.6.2 UE RF requirements for PC2

#### 7.6.3 UE RF requirements for PC1 FWVM

### 7.7 Rel-19 HPUE for DC combinations of LTE band(s) and NR band(s)

#### 7.7.1 Rapporteur input (WID/TR/big CR)

**TR skeleton**

[**R4-2411281**](file:///D:\RAN4%23112\Docs\R4-2411281.zip) **TR skeleton for TR37.898**

*Type: draft TR For: Agreement  
 37.898 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: China Unicom*

**Decision:** The document was **not treated**.

[**R4-2411286**](file:///D:\RAN4%23112\Docs\R4-2411286.zip) **TR 37.898 v0.1.0 HPUE\_DC\_LTE\_NR\_R19**

*Type: draft TR For: Agreement  
 37.898 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: China Unicom*

**Abstract:**

MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

[**R4-2412364**](file:///D:\RAN4%23112\Docs\R4-2412364.zip) **TR 37.898 v0.1.0 Rel-19 High power UE for FR1 for DC\_R18\_xBLTE\_yBNR\_zDLnUL**

*Type: draft TR For: Agreement  
 37.898 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

TR 37.898 v0.1.0 Rel-19 High power UE for FR1 for DC\_R18\_xBLTE\_yBNR\_zDLnUL. MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**WID revision**

[**R4-2411283**](file:///D:\RAN4%23112\Docs\R4-2411283.zip) **Revised WID on Rel-19 High power UE (power class 1.5 or 2) for Dual Connectivity (DC) combinations of LTE band(s) and NR band(s)**

*Type: WID revised For: Endorsement  
 Source: China Unicom*

**Abstract:**

MCC: It is assumed this is for post-meeting endorsement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**Big CR**

[**R4-2411716**](file:///D:\RAN4%23112\Docs\R4-2411716.zip) **Draft Big CR on Rel-19 HPUE for DC combinations of LTE band(s) and NR band(s)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-18)  
  
 Source: China Unicom*

**Abstract:**

MCC: This is for post-meeting endorsement.

**Decision:** The document was **for email approval**.

[**R4-2412363**](file:///D:\RAN4%23112\Docs\R4-2412363.zip) **draft big CR 38.101-3 new combinations Rel-19 EN-DC HPUE**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

draft big CR 38.101-3 new combinations Rel-19 EN-DC HPUE. MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2411284**](file:///D:\RAN4%23112\Docs\R4-2411284.zip) **Big CR on Rel-19 HPUE for DC combinations of LTE band(s) and NR band(s)**

*Type: CR For: Endorsement  
 38.101-3 v18.6.0 CR-1270 rev Cat: B (Rel-19)  
  
 Source: China Unicom*

**Abstract:**

MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 should be submitted at this stage of Rel-19.

**Decision:** The document was **withdrawn**.

#### 7.7.2 UE RF requirements

[**R4-2411022**](file:///D:\RAN4%23112\Docs\R4-2411022.zip) **TP for TR37.898 to add HP-ENDC 3-11\_n79 and 8-42\_n79**

*Type: pCR For: Approval  
 37.898 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: SoftBank Corp.*

**Abstract:**

MCC: Updated the version of Rel-19 draft TR to current version 0.1.0.

**Decision:** The document was **not treated**.

[**R4-2411261**](file:///D:\RAN4%23112\Docs\R4-2411261.zip) **TP for TR 37.898 to include DC\_1A\_n78A with 3Tx**

*Type: pCR For: Approval  
 37.898 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: SK Telecom, Murata Manufacturing Co. Ltd*

**Abstract:**

MCC: Updated the version of Rel-19 draft TR to current version 0.1.0.

**Decision:** The document was **not treated**.

[**R4-2411262**](file:///D:\RAN4%23112\Docs\R4-2411262.zip) **TP for TR 37.898 to include DC\_5A\_n78A with 3Tx**

*Type: pCR For: Approval  
 37.898 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: SK Telecom, Murata Manufacturing Co. Ltd*

**Abstract:**

MCC: Updated the version of Rel-19 draft TR to version 0.1.0.

**Decision:** The document was **not treated**.

[**R4-2412842**](file:///D:\RAN4%23112\Docs\R4-2412842.zip) **Draft CR 38.101-3 for adding some power class 2 EN-DC band combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-18)  
  
 Source: KDDI, Samsung*

**Decision:** The document was **not treated**.

### 7.8 Rel-19 HPUE for NR intra-band CA and inter-band CA/DC with/without NR SUL

#### 7.8.1 Rapporteur input (WID/TR/big CR)

**TR skeleton**

[**R4-2411107**](file:///D:\RAN4%23112\Docs\R4-2411107.zip) **TR skeleton for TR38.794 on High power UE (power class 1.5 or 2) for NR Intra-band Carrier Aggregation (CA) with high power on FDD or TDD band**

*Type: draft TR For: Agreement  
 38.794 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: CATT*

**Decision:** The document was **not treated**.

[**R4-2411282**](file:///D:\RAN4%23112\Docs\R4-2411282.zip) **TR skeleton for TR38.750**

*Type: draft TR For: Agreement  
 38.750 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: China Unicom*

**Decision:** The document was **not treated**.

[**R4-2412355**](file:///D:\RAN4%23112\Docs\R4-2412355.zip) **TR38.792 skeleton for PC1.5 with high power on both FDD and TDD bands**

*Type: draft TR For: Agreement  
 38.792 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: OPPO*

**Decision:** The document was **not treated**.

[**R4-2411287**](file:///D:\RAN4%23112\Docs\R4-2411287.zip) **TR 38.750 v0.1.0 HPUE\_NR\_CADC\_SUL\_R19-FDD**

*Type: draft TR For: Agreement  
 38.750 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: China Unicom*

**Abstract:**

MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

[**R4-2412268**](file:///D:\RAN4%23112\Docs\R4-2412268.zip) **draft TR skeleton for HPUE\_NR\_CADC\_SUL\_R19**

*Type: draft TR For: Agreement  
 38.746 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: China Telecom*

**Abstract:**

draft TR skeleton for email approval. MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**WID revision**

[**R4-2412266**](file:///D:\RAN4%23112\Docs\R4-2412266.zip) **Revised WID for HPUE\_NR\_CADC\_SUL\_R19**

*Type: WID revised For: Endorsement  
 Source: China Telecom*

**Abstract:**

for email approval. MCC: It is assumed this is for post-meeting endorsement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**Big CR**

[**R4-2412843**](file:///D:\RAN4%23112\Docs\R4-2412843.zip) **DraftBig CR to 38.101-1 new combinations for HPUE\_NR\_CADC\_SUL\_R19**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: China Telecom Corporation Ltd.*

**Abstract:**

Draft BigCR for email approval. MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2412267**](file:///D:\RAN4%23112\Docs\R4-2412267.zip) **Big CR to 38.101-1 new combinations for Rel-19 NR HPUE Inter-band**

*Type: CR For: Endorsement  
 38.101-1 v18.6.0 CR-2424 rev Cat: B (Rel-19)  
  
 Source: China Telecom*

**Abstract:**

MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19.

**Decision:** The document was **withdrawn**.

**Work procedure**

[**R4-2412270**](file:///D:\RAN4%23112\Docs\R4-2412270.zip) **Work procedure discussion for HPUE\_NR\_CADC\_SUL\_R19**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision:** The document was **not treated**.

#### 7.8.2 UE RF requirements for intra-band CA

[**R4-2413298**](file:///D:\RAN4%23112\Docs\R4-2413298.zip) **Draft CR for 38.101-1: T-Mobile HPUE CA combinations Intra**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: T-Mobile USA*

**Decision:** The document was **not treated**.

#### 7.8.3 UE RF requirements for inter-band CA/DC with high power on TDD band(s)

[**R4-2411320**](file:///D:\RAN4%23112\Docs\R4-2411320.zip) **TP for HPUE CA\_n1-n18-n41 with 2UL for TR 38.746**

*Type: pCR For: Approval  
 38.746 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Samsung, KDDI Corporation, Murata*

**Decision:** The document was **not treated**.

[**R4-2411321**](file:///D:\RAN4%23112\Docs\R4-2411321.zip) **TP for HPUE CA\_n3-n18-n41 with 2UL for TR 38.746**

*Type: pCR For: Approval  
 38.746 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Samsung, KDDI Corporation, Qualcomm*

**Decision:** The document was **not treated**.

[**R4-2411322**](file:///D:\RAN4%23112\Docs\R4-2411322.zip) **TP for HPUE CA\_n18-n28-n41 with 2UL for TR 38.746**

*Type: pCR For: Approval  
 38.746 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Samsung, KDDI Corporation, Murata*

**Decision:** The document was **not treated**.

[**R4-2412269**](file:///D:\RAN4%23112\Docs\R4-2412269.zip) **Draft CR for 38.101-1 to add PC support for CA\_n28A-n41A-n77A with 2UL**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: China Telecom*

**Decision:** The document was **not treated**.

[**R4-2412271**](file:///D:\RAN4%23112\Docs\R4-2412271.zip) **Draft CR for 38.101-1 to update note for NR CA configuration with 2 SUL cells**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: F (Rel-19)  
  
 Source: China Telecom*

**Decision:** The document was **not treated**.

[**R4-2412365**](file:///D:\RAN4%23112\Docs\R4-2412365.zip) **TP for TR 38.792, 3Tx inter-band CA\_n1-n78**

*Type: pCR For: Approval  
 38.792 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson, BT plc*

**Abstract:**

TP for TR 38.792, 3Tx inter-band CA\_n1-n78

**Decision:** The document was **not treated**.

[**R4-2412366**](file:///D:\RAN4%23112\Docs\R4-2412366.zip) **TP for TR 38.792, 3Tx inter-band CA\_n3-n78**

*Type: pCR For: Approval  
 38.792 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson, BT plc*

**Abstract:**

TP for TR 38.792, 3Tx inter-band CA\_n3-n78

**Decision:** The document was **not treated**.

[**R4-2412367**](file:///D:\RAN4%23112\Docs\R4-2412367.zip) **TP for TR 38.792, 3Tx inter-band CA\_n7-n78**

*Type: pCR For: Approval  
 38.792 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson, BT plc*

**Abstract:**

TP for TR 38.792, 3Tx inter-band CA\_n7-n78. MCC: The current version of the Rel-19 draft TR is v0.0.1.

**Decision:** The document was **not treated**.

[**R4-2412368**](file:///D:\RAN4%23112\Docs\R4-2412368.zip) **TP for TR 38.792, 3Tx inter-band CA\_n28-n78**

*Type: pCR For: Approval  
 38.792 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson, BT plc*

**Abstract:**

TP for TR 38.792, 3Tx inter-band CA\_n28-n78. MCC: The current version of the Rel-19 draft TR is v0.0.1.

**Decision:** The document was **not treated**.

[**R4-2412373**](file:///D:\RAN4%23112\Docs\R4-2412373.zip) **draft CR 38.101-1 for adding n78 PC2 UL to 2 and 3 bands NR CA combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 38.101-1 for adding n78 PC2 UL to 2 and 3 bands NR CA combinations

**Decision:** The document was **not treated**.

[**R4-2412841**](file:///D:\RAN4%23112\Docs\R4-2412841.zip) **Draft CR 38.101-1 Rel-19 for adding some power class 2 NR CA band combinations**

*Type: draftCR For: Endorsement  
 38.746 v0.0.1 CR- rev Cat: B (Rel-19)  
  
 Source: KDDI Corporation*

**Decision:** The document was **not treated**.

[**R4-2412844**](file:///D:\RAN4%23112\Docs\R4-2412844.zip) **TP for HPUE CA\_n1-n18-n77 with 2UL for TR 38.746**

*Type: pCR For: Approval  
 38.746 v0.9.0 CR- rev Cat: (Rel-19)  
  
 Source: KDDI, Samsung, LGE*

**Decision:** The document was **not treated**.

[**R4-2413299**](file:///D:\RAN4%23112\Docs\R4-2413299.zip) **Draft CR for 38.101-1: T-Mobile HPUE CA combinations TDD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: T-Mobile USA*

**Decision:** The document was **not treated**.

#### 7.8.4 UE RF requirements for inter-band CA/DC with high power on FDD band(s)

[**R4-2413300**](file:///D:\RAN4%23112\Docs\R4-2413300.zip) **Draft CR for 38.101-1: T-Mobile HPUE CA combinations FDD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: T-Mobile USA*

**Decision:** The document was **not treated**.

[**R4-2413302**](file:///D:\RAN4%23112\Docs\R4-2413302.zip) **TP for TR 38.750 DL CA\_n66A-n71A-n77A with PC2 UL CA\_n66A-n71A**

*Type: pCR For: Approval  
 38.750 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: T-Mobile USA*

**Decision:** The document was **not treated**.

[**R4-2413303**](file:///D:\RAN4%23112\Docs\R4-2413303.zip) **TP for TR 38.750 DL CA\_n77A-n85A with PC2 UL n85**

*Type: pCR For: Approval  
 38.750 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: T-Mobile USA*

**Decision:** The document was **not treated**.

[**R4-2413304**](file:///D:\RAN4%23112\Docs\R4-2413304.zip) **TP for TR 38.750 DL CA\_n66A-n71A with PC2 UL CA\_n66A-n71A**

*Type: pCR For: Approval  
 38.750 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: T-Mobile USA*

**Decision:** The document was **not treated**.

#### 7.8.5 UE RF requirements for inter-band CA/DC with high power on both FDD and TDD bands

[**R4-2413301**](file:///D:\RAN4%23112\Docs\R4-2413301.zip) **Draft CR for 38.101-1: T-Mobile HPUE CA combinations 3Tx**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: T-Mobile USA*

**Decision:** The document was **not treated**.

### 7.9 Rel-19 Additional NR bands for NR features

#### 7.9.1 Rapporteur input (WID/TR/big CR)

**WID revision**

[**R4-2411941**](file:///D:\RAN4%23112\Docs\R4-2411941.zip) **Revised WID: Additional NR bands for NR features in Rel-19**

*Type: WID revised For: Endorsement  
 Source: ZTE Corporation, Huawei*

**Abstract:**

MCC: It is assumed this is for post-meeting endorsement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**Big draft CR**

[**R4-2412132**](file:///D:\RAN4%23112\Docs\R4-2412132.zip) **TS 38.101-1 draft big CR to include 4Rx**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation*

**Abstract:**

MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

[**R4-2412133**](file:///D:\RAN4%23112\Docs\R4-2412133.zip) **TS 38.101-1 draft big CR to include 8Rx**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation*

**Abstract:**

MCC: This is for post-meeting endorsement. This is a Rel-19 draftCR (running CR).

**Decision:** The document was **for email approval**.

**Withdrawn**

[**R4-2412578**](file:///D:\RAN4%23112\Docs\R4-2412578.zip) **TS 38.101-1 big CR for NR\_bands\_xFeature\_R19 for UL-MIMO part**

*Type: CR For: Endorsement  
 38.101-1 v18.6.0 CR-2453 rev Cat: B (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19. Since this was not submitted at submission deadline it can be withdrawn and a new "draft CR" tdoc can be assigned.

**Decision:** The document was **withdrawn**.

[**R4-2411942**](file:///D:\RAN4%23112\Docs\R4-2411942.zip) **TS 38.101-1 draft big CR to include 4Rx**

*Type: CR For: Endorsement  
 38.101-3 v18.6.0 CR-1274 rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation*

**Abstract:**

MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19.

**Decision:** The document was **withdrawn**.

[**R4-2411943**](file:///D:\RAN4%23112\Docs\R4-2411943.zip) **TS 38.101-1 draft big CR to include 8Rx**

*Type: CR For: Endorsement  
 38.101-3 v18.6.0 CR-1275 rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation*

**Abstract:**

MCC: There should not be any Rel-19 CRs for agreement at RAN4#112. This was changed to for "endorsement". This need to be clarified by session Chair that no Rel-19 CRs should be submitted at this stage of Rel-19.

**Decision:** The document was **withdrawn**.

#### 7.9.2 UE RF requirements for UL-MIMO in a single band

#### 7.9.3 UE RF requirements for 4Rx

[**R4-2411324**](file:///D:\RAN4%23112\Docs\R4-2411324.zip) **Draft CR for TS 38.101-1[R19] 4Rx handheld UE for n13**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Samsung, TELUS, Bell Mobility, ZTE Corporation*

**Decision: Endorsed.**

#### 7.9.4 UE RF requirements for 8Rx

[**R4-2411740**](file:///D:\RAN4%23112\Docs\R4-2411740.zip) **(NR\_bands\_xFeature\_R19-Core) Draft CR for 38.101-1 to introduce n34 support 8Rx**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: CMCC, ZTE Corporation*

**Decision: Endorsed.**

### 7.10 Rel-19 downlink interruption for NR and EN-DC band combinations at dynamic Tx Switching in Uplink

#### 7.10.1 Rapporteur input (WID/TR/big CR)

**TR skeleton**

[**R4-2412468**](file:///D:\RAN4%23112\Docs\R4-2412468.zip) **TR 37.887 0.0.1 TR skeleton for Rel-19 downlink interruption for NR and EN-DC band combinations at dynamic Tx Switching in Uplink**

*Type: draft TR For: Agreement  
 37.887 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: China Telecom*

**Decision: Agreed.**

#### 7.10.2 UE RF requirements

[**R4-2411150**](file:///D:\RAN4%23112\Docs\R4-2411150.zip) **On DL interruption for Tx switching across 3 and 4 bands**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2413318**](file:///D:\RAN4%23112\Docs\R4-2413318.zip) **DL interruptions for mid band combinations**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

### 7.11 Simultaneous Rx/Tx band combinations for NR CA/DC, NR SUL and LTE/NR DC in Rel-19

#### 7.11.1 Rapporteur input (WID/TR/big CR)

**WID revsion**

[**R4-2412539**](file:///D:\RAN4%23112\Docs\R4-2412539.zip) **Revised WID Simultaneous RxTx band combinations for NR CADC, NR SUL and LTENR DC in Rel-19**

*Type: WID revised For: Endorsement  
 Source: Huawei, HiSilicon*

**Decision:** The document was **for email approval**.

#### 7.11.2 UE RF requirements

[**R4-2411157**](file:///D:\RAN4%23112\Docs\R4-2411157.zip) **On simultaneous Rx/Tx**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411256**](file:///D:\RAN4%23112\Docs\R4-2411256.zip) **Discussion on simultaneous Rx-Tx of CA\_n40-n41**

*Type: discussion For: Discussion  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

[**R4-2412540**](file:///D:\RAN4%23112\Docs\R4-2412540.zip) **Discussion on Rel-19 simultaneous Rx-Tx issues**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**Draft CR**

[**R4-2411158**](file:///D:\RAN4%23112\Docs\R4-2411158.zip) **Draft CR to 38.101-1 to clarify simultaneous Rx/Tx applicability for FDD-TDD combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: F (Rel-19)  
  
 Source: Apple*

Nokia: we have proposals in other CRs.

Apple: this is direct wording in the TR. We could change the wording.

**Decision: Revised to R4-2414266 (from R4-2411158).**

[**R4-2414266**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414266.zip) **Draft CR to 38.101-1 to clarify simultaneous Rx/Tx applicability for FDD-TDD combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: F (Rel-19)  
  
 Source: Apple*

Nokia: we have proposals in other CRs.

Apple: this is direct wording in the TR. We could change the wording.

**Decision: Return to.**

[**R4-2411159**](file:///D:\RAN4%23112\Docs\R4-2411159.zip) **Draft CR to 38.101-3 to clarify simultaneous Rx/Tx applicability for band combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: F (Rel-19)  
  
 Source: Apple*

CHTTL/Skyworks: TR for FR1+FR2, wording is “simultaenous Rx-Tx shall be mandatory”

**Decision: Revised to R4-2414267 (from R4-2411159).**

[**R4-2414267**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414267.zip) **Draft CR to 38.101-3 to clarify simultaneous Rx/Tx applicability for band combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: F (Rel-19)  
  
 Source: Apple*

**Decision: Return to.**

[**R4-2412541**](file:///D:\RAN4%23112\Docs\R4-2412541.zip) **drafCR to 38.101-1: On Rel-19 simultaneous Rx-Tx**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

### 7.12 Adding channel bandwidth(s) support to existing NR bands and CA/ENDC combinations in REL-19

#### 7.12.1 Rapporteur input (WID/TR/big CR)

**TR skeleton**

[**R4-2411198**](file:///D:\RAN4%23112\Docs\R4-2411198.zip) **TR 37862 skeleton for the basket WI on adding new channel BW in existing NR bands**

*Type: draft TR For: Agreement  
 37.862 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a draft TR skeleton to capture the work related to the basket WI on adding channel WB in existing NR bands

**Decision:** The document was **revised to** [**R4-2412511**](file:///D:\RAN4%23112\Docs\R4-2412511.zip).

[**R4-2412511**](file:///D:\RAN4%23112\Docs\R4-2412511.zip) **TR 37862 skeleton for the basket WI on adding new channel BW in existing NR bands**

*Type: draft TR For: Agreement  
 37.862 v0.0.2 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson*

(Replaces [R4-2411198](file:///D:\RAN4%23112\Docs\R4-2411198.zip))

**Abstract:**

This contribution is a draft TR skeleton to capture the work related to the basket WI on adding channel WB in existing NR bands

**Decision: Agreed.**

**WID revision**

[**R4-2411197**](file:///D:\RAN4%23112\Docs\R4-2411197.zip) **Draft revised basket WI on adding new channel BW in existing NR bands**

*Type: WID revised For: Endorsement  
 Source: Ericsson*

**Abstract:**

This contribution is a revision of the basket WI on adding channel WB in existing NR bands

**Decision:** The document was **revised to** [**R4-2412486**](file:///D:\RAN4%23112\Docs\R4-2412486.zip).

[**R4-2412486**](file:///D:\RAN4%23112\Docs\R4-2412486.zip) **Draft revised basket WI on adding new channel BW in existing NR bands**

*Type: WID revised For: Endorsement  
 Source: Ericsson*

(Replaces [R4-2411197](file:///D:\RAN4%23112\Docs\R4-2411197.zip))

**Abstract:**

This contribution is a revision of the basket WI on adding channel WB in existing NR bands

**Decision:** The document was **for email approval**.

#### 7.12.2 UE RF requirements

[**R4-2411148**](file:///D:\RAN4%23112\Docs\R4-2411148.zip) **n48 100MHz UL**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2413200**](file:///D:\RAN4%23112\Docs\R4-2413200.zip) **On NS\_27 A-MPR for larger than 40MHz UL CBW for n48**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In RAN#104, a new band BW basket [1] was agreed upon. The only request made at the time is for the support of larger UL CBW for band n48. In this contribution, we discuss the required work and the potential impact of NS\_27.

**Decision: Noted.**

### 7.13 Introduction of the 1.4 GHz Band

#### 7.13.1 General aspects

#### 7.13.2 System parameters and UE RF requirements

[**R4-2411167**](file:///D:\RAN4%23112\Docs\R4-2411167.zip) **On NR new 1.4GHz band REFSENS**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2411219**](file:///D:\RAN4%23112\Docs\R4-2411219.zip) **NR Band 1.4 GHz - system parameters**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is discussing the system paraemters of the new NR Band 1.4 GHz

**Decision: Noted.**

[**R4-2411901**](file:///D:\RAN4%23112\Docs\R4-2411901.zip) **Systems parameters and RF requirements of 1.4GHz band**

*Type: other For: Approval  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

**Draft CR**

[**R4-2411998**](file:///D:\RAN4%23112\Docs\R4-2411998.zip) **draftCR 38.101-1 Introduction of n110**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless.*

**Decision: Postponed.**

#### 7.13.3 BS RF core requirements

**Draft CR**

38.104

[**R4-2413121**](file:///D:\RAN4%23112\Docs\R4-2413121.zip) **draftCR to 38.104 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 38.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

38.141-1

[**R4-2413122**](file:///D:\RAN4%23112\Docs\R4-2413122.zip) **draftCR to 38.141-1 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 38.141-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

38.141-2

[**R4-2413123**](file:///D:\RAN4%23112\Docs\R4-2413123.zip) **draftCR to 38.141-2 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 38.141-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

38.106

[**R4-2412893**](file:///D:\RAN4%23112\Docs\R4-2412893.zip) **Draft CR to 38.106 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 38.106 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

38.115-1

[**R4-2412894**](file:///D:\RAN4%23112\Docs\R4-2412894.zip) **Draft CR to 38.115-1 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 38.115-1 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

38.174

[**R4-2412895**](file:///D:\RAN4%23112\Docs\R4-2412895.zip) **Draft CR to 38.174 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 38.174 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

38.176-1

[**R4-2412896**](file:///D:\RAN4%23112\Docs\R4-2412896.zip) **Draft CR to 38.176-1 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 38.176-1 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

38.176-2

[**R4-2412897**](file:///D:\RAN4%23112\Docs\R4-2412897.zip) **Draft CR to 38.176-2 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 38.176-2 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

36.104

[**R4-2413117**](file:///D:\RAN4%23112\Docs\R4-2413117.zip) **draftCR to 36.104 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 36.104 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

36.141

[**R4-2413118**](file:///D:\RAN4%23112\Docs\R4-2413118.zip) **draftCR to 36.141 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 36.141 v18.4.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

37.104

[**R4-2413119**](file:///D:\RAN4%23112\Docs\R4-2413119.zip) **draftCR to 37.104 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 37.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

37.141

[**R4-2413120**](file:///D:\RAN4%23112\Docs\R4-2413120.zip) **draftCR to 37.141 on introduction of Band n110**

*Type: draftCR For: Endorsement  
 37.141 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia, MidWave Wireless*

**Decision: Postponed.**

#### 7.13.4 RRM core requirements

38.133

[**R4-2412397**](file:///D:\RAN4%23112\Docs\R4-2412397.zip) **draft CR to TS 38.133: Introduction of the 1.4GHz band**

*Type: draftCR For: Endorsement  
 38.133 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

### 7.14 Introduction of LTE FDD band in 1800–1830 MHz for Canada

#### 7.14.1 General aspects

**Work plan**

[**R4-2411031**](file:///D:\RAN4%23112\Docs\R4-2411031.zip) **Work plan for LTE FDD new band in 1800–1830 MHz for Canada**

*Type: Work Plan For: Approval  
 Source: NOVAMINT, Ubiik, Semtech, Telit, Sequans Communications*

**Abstract:**

A spectrum-related work item was agreed to specify a new LTE band in the 1800-1830 MHz frequency range. This contribution provides a work plan to complete the technical work. MCC: The type was revised to work plan.

Qualcomm: it might be difficult to agree on the RF requirement in this meeting. Maybe we can postpone them to next meeting.

**Decision: Noted.**

**Regulation**

[**R4-2411032**](file:///D:\RAN4%23112\Docs\R4-2411032.zip) **Regulation for LTE FDD new band in 1800–1830 MHz for Canada**

*Type: discussion For: Discussion  
 Source: NOVAMINT, Ubiik, Semtech, Telit, Sequans Communications*

**Abstract:**

A spectrum-related work item was agreed to specify a new LTE band in the 1800-1830 MHz frequency range. This contribution provides the background on the technical regulation

**Decision: Noted.**

#### 7.14.2 System parameters and UE RF requirements

[**R4-2411033**](file:///D:\RAN4%23112\Docs\R4-2411033.zip) **UE RF Specification impact due to Introduction of LTE FDD new band in 1800–1830 MHz for Canada**

*Type: discussion For: Discussion  
 Source: NOVAMINT, Ubiik, Semtech, Telit, Sequans Communications*

**Abstract:**

A spectrum-related work item was agreed to specify a new LTE band in the 1800-1830 MHz frequency range. In this contribution we discuss the necessary changes into Core specifications relevant to UE RF requirements due to introduction of the new band

Skyworks: Need more time to check the number.

Qualcomm: co-existence. Band 3, we should consider differen numbers.

Apple: There are some observations about the A-MPR requirements. Why to look at uplink to uplink separation rather than uplink to downlink of other band.

**Decision: Noted.**

[**R4-2411220**](file:///D:\RAN4%23112\Docs\R4-2411220.zip) **LTE Band 1800-1830 MHz - system parameters**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is discussing the system paraemters of the new LTE Band 1800-1830 MHz

**Decision: Noted.**

[**R4-2412618**](file:///D:\RAN4%23112\Docs\R4-2412618.zip) **Initial considerations on RF filtering and UE Co-Existence**

*Type: discussion For: Discussion  
 Source: Qualcomm France*

**Abstract:**

Initial considerations on RF filtering and UE Co-Existence are provided.

**Decision: Noted.**

#### 7.14.3 BS RF core requirements

[**R4-2411034**](file:///D:\RAN4%23112\Docs\R4-2411034.zip) **BS RF Specification impact due to Introduction of LTE FDD new band in 1800–1830 MHz for Canada**

*Type: discussion For: Discussion  
 Source: NOVAMINT, Ubiik, Semtech, Telit, Sequans Communications*

**Abstract:**

A spectrum-related work item was agreed to specify a new LTE band in the 1800-1830 MHz frequency range. In this contribution we discuss the necessary changes into Core specifications relevant to BS RF requirements due to introduction of the new band

**Decision: Noted.**

#### 7.14.4 RRM core requirements

[**R4-2411035**](file:///D:\RAN4%23112\Docs\R4-2411035.zip) **RRM Specification impact due to Introduction of LTE FDD new band in 1800–1830 MHz for Canada**

*Type: discussion For: Discussion  
 Source: NOVAMINT, Ubiik, Semtech, Telit, Sequans Communications*

**Abstract:**

A spectrum-related work item was agreed to specify a new LTE band in the 1800-1830 MHz frequency range. In this contribution we discuss the necessary changes into Core specifications relevant to RRM due to introduction of the new band

Nokia: there are requirement depending on UE RF REFSENS.

**Decision: Noted.**

### 7.15 Introduction of NR bands n87 and n88

#### 7.15.1 General aspects

**WID revision**

[**R4-2412000**](file:///D:\RAN4%23112\Docs\R4-2412000.zip) **Revised WID for introduction of new bands n87 and n88 WI**

*Type: WID revised For: Endorsement  
 Source: Nokia*

**Abstract:**

MCC: It is assumed this is for post-meeting endorsement. [Post-Meeting]

**Decision: Withdrawn.**

**Work plan**

[**R4-2411999**](file:///D:\RAN4%23112\Docs\R4-2411999.zip) **Work plan for introduction of new bands n87 and n88 WI**

*Type: Work Plan For: Approval  
 Source: Nokia*

Chair: encourage companies to follow the work plan in this tdoc.

Huawei: we need discussions on the regulaton. We can agree on the starting point.

**Decision: Approved.**

[**R4-2413258**](file:///D:\RAN4%23112\Docs\R4-2413258.zip) **Initial discussion on general aspects for introduction of NR bands n87 and n88**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution we provide initial analysis of general and regulatory aspects for for introduction of NR bands n87 and n88.

**Decision: Noted.**

#### 7.15.2 System parameters and UE RF requirements

[**R4-2411086**](file:///D:\RAN4%23112\Docs\R4-2411086.zip) **System parameters for new NR bands n87 and n88**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

[**R4-2411211**](file:///D:\RAN4%23112\Docs\R4-2411211.zip) **Bands n87-n88 - UE RF requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is giving an overview of the UE RF impacts when introducing NR bands n87-n88. [MCC]: Move [R4-2411211](file:///D:\RAN4%23112\Docs\R4-2411211.zip) from AI 7.12.2 to AI 7.15.2, and treat it in [113].

**Decision: Noted.**

[**R4-2411899**](file:///D:\RAN4%23112\Docs\R4-2411899.zip) **Systems parameters and RF requirements of n87 and n88**

*Type: other For: Approval  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412001**](file:///D:\RAN4%23112\Docs\R4-2412001.zip) **Expected changes due to introduction of new bands n87 and n88**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2413259**](file:///D:\RAN4%23112\Docs\R4-2413259.zip) **Initial discussion on UE aspects for introduction of NR bands n87 and n88**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution we provide initial analysis of UE aspects for for introduction of NR bands n87 and n88.

**Decision: Noted.**

**Draft CR**

38.101-1

[**R4-2411088**](file:///D:\RAN4%23112\Docs\R4-2411088.zip) **draft CR to TS 38.101-1, introduction on system parameters for NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: CATT*

**Decision: Postponed.**

[**R4-2411215**](file:///D:\RAN4%23112\Docs\R4-2411215.zip) **Draft CR to 38.101-1 - Introduction of bands n87-n88**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 38.101-1 for the introduction of bands n87-n88

**Decision: Postponed.**

[**R4-2411903**](file:///D:\RAN4%23112\Docs\R4-2411903.zip) **(NR\_bands\_n87\_n88-Core) Draft CR to TS38.101-1: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.101-5

[**R4-2411945**](file:///D:\RAN4%23112\Docs\R4-2411945.zip) **NR band n87 and n88 system parameters**

*Type: draftCR For: Endorsement  
 38.101-5 v18.6.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

#### 7.15.3 BS RF core requirements

[**R4-2411087**](file:///D:\RAN4%23112\Docs\R4-2411087.zip) **BS RF requirements for new NR bands n87 and n88**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

[**R4-2411210**](file:///D:\RAN4%23112\Docs\R4-2411210.zip) **Bands n87-n88 - BS RF requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is giving an overview of the BS RF impacts when introducing NR bands n87-n88

**Decision: Noted.**

[**R4-2413260**](file:///D:\RAN4%23112\Docs\R4-2413260.zip) **Initial discussion on BS aspects for introduction of NR bands n87 and n88**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution we provide initial analysis of BS aspects for for introduction of NR bands n87 and n88.

**Decision: Noted.**

**Draft CR**

38.104

[**R4-2411089**](file:///D:\RAN4%23112\Docs\R4-2411089.zip) **draft CR to TS 38.104 on introduction NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: CATT*

**Decision: Postponed.**

[**R4-2411904**](file:///D:\RAN4%23112\Docs\R4-2411904.zip) **(NR\_bands\_n87\_n88-Core) Draft CR to TS38.104: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

[**R4-2411214**](file:///D:\RAN4%23112\Docs\R4-2411214.zip) **Draft CR to 38.104 - Introduction of bands n87-n88**

*Type: draftCR For: Endorsement  
 38.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 38.104 for the introduction of bands n87-n88

**Decision: Postponed.**

[**R4-2413107**](file:///D:\RAN4%23112\Docs\R4-2413107.zip) **draftCR to 38.104 on introduction of Band n87 and n88**

*Type: draftCR For: Endorsement  
 38.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

38.141-1

[**R4-2411216**](file:///D:\RAN4%23112\Docs\R4-2411216.zip) **Draft CR to 38.141-1 - Introduction of bands n87-n88**

*Type: draftCR For: Endorsement  
 38.141-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 38.141-1 for the introduction of bands n87-n88

**Decision: Postponed.**

[**R4-2411905**](file:///D:\RAN4%23112\Docs\R4-2411905.zip) **(NR\_bands\_n87\_n88-Perf) Draft CR to TS38.141-1: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.141-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

[**R4-2413108**](file:///D:\RAN4%23112\Docs\R4-2413108.zip) **draftCR to 38.141-1 on introduction of Band n87 and n88**

*Type: draftCR For: Endorsement  
 38.141-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

38.141-2

[**R4-2411217**](file:///D:\RAN4%23112\Docs\R4-2411217.zip) **Draft CR to 38.141-2 - Introduction of bands n87-n88**

*Type: draftCR For: Endorsement  
 38.141-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 38.141-2 for the introduction of bands n87-n88

**Decision: Postponed.**

[**R4-2411906**](file:///D:\RAN4%23112\Docs\R4-2411906.zip) **(NR\_bands\_n87\_n88-Perf) Draft CR to TS38.141-2: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.141-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

[**R4-2413109**](file:///D:\RAN4%23112\Docs\R4-2413109.zip) **draftCR to 38.141-2 on introduction of Band n87 and n88**

*Type: draftCR For: Endorsement  
 38.141-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

38.307

[**R4-2411902**](file:///D:\RAN4%23112\Docs\R4-2411902.zip) **(NR\_bands\_n87\_n88-Core) Draft CR to TS38.307: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.307 v18.2.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.106

[**R4-2411907**](file:///D:\RAN4%23112\Docs\R4-2411907.zip) **(NR\_bands\_n87\_n88-Core) Draft CR to TS38.106: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.106 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.176-1

[**R4-2411908**](file:///D:\RAN4%23112\Docs\R4-2411908.zip) **(NR\_bands\_n87\_n88-Perf) Draft CR to TS38.176-1: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.176-1 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.176-2

[**R4-2411909**](file:///D:\RAN4%23112\Docs\R4-2411909.zip) **(NR\_bands\_n87\_n88-Perf) Draft CR to TS38.176-2: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.176-2 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.115-1

[**R4-2411910**](file:///D:\RAN4%23112\Docs\R4-2411910.zip) **(NR\_bands\_n87\_n88-Perf) Draft CR to TS38.115-1: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.115-1 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.174

[**R4-2411911**](file:///D:\RAN4%23112\Docs\R4-2411911.zip) **(NR\_bands\_n87\_n88-Core) Draft CR to TS38.174: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.174 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

36.104

[**R4-2411212**](file:///D:\RAN4%23112\Docs\R4-2411212.zip) **Draft CR to 36.104 - Introduction of bands n87-n88**

*Type: draftCR For: Endorsement  
 36.104 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 36.104 for the introduction of bands n87-n88

**Decision: Postponed.**

[**R4-2413103**](file:///D:\RAN4%23112\Docs\R4-2413103.zip) **draftCR to 36.104 on introduction of Band n87 and n88**

*Type: draftCR For: Endorsement  
 36.104 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

36.141

[**R4-2413104**](file:///D:\RAN4%23112\Docs\R4-2413104.zip) **draftCR to 36.141 on introduction of Band n87 and n88**

*Type: draftCR For: Endorsement  
 36.141 v18.4.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

37.104

[**R4-2411213**](file:///D:\RAN4%23112\Docs\R4-2411213.zip) **Draft CR to 37.104 - Introduction of bands n87-n88**

*Type: draftCR For: Endorsement  
 37.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 37.104 for the introduction of bands n87-n88

**Decision: Postponed.**

[**R4-2413105**](file:///D:\RAN4%23112\Docs\R4-2413105.zip) **draftCR to 37.104 on introduction of Band n87 and n88**

*Type: draftCR For: Endorsement  
 37.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

37.141

[**R4-2413106**](file:///D:\RAN4%23112\Docs\R4-2413106.zip) **draftCR to 37.141 on introduction of Band n87 and n88**

*Type: draftCR For: Endorsement  
 37.141 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

37.145-1

[**R4-2411912**](file:///D:\RAN4%23112\Docs\R4-2411912.zip) **(NR\_bands\_n87\_n88-Perf) Draft CR to TS37.145-1: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 37.145-1 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

37.145-2

[**R4-2411913**](file:///D:\RAN4%23112\Docs\R4-2411913.zip) **(NR\_bands\_n87\_n88-Perf) Draft CR to TS37.145-2: Introduction of NR bands n87 and n88**

*Type: draftCR For: Endorsement  
 37.145-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

#### 7.15.4 RRM core requirements

38.133

[**R4-2411218**](file:///D:\RAN4%23112\Docs\R4-2411218.zip) **Draft CR to 38.133 - Introduction of bands n87-n88**

*Type: draftCR For: Endorsement  
 38.133 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 38.133 for the introduction of bands n87-n88

**Decision: Postponed.**

[**R4-2412395**](file:///D:\RAN4%23112\Docs\R4-2412395.zip) **draft CR to TS 38.133: Introduction of NR Bands n87 and n88**

*Type: draftCR For: Endorsement  
 38.133 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

### 7.16 Introduction of NR band n68

#### 7.16.1 General aspects

**Work plan**

[**R4-2411199**](file:///D:\RAN4%23112\Docs\R4-2411199.zip) **Band n68 - Work plan**

*Type: Work Plan For: Approval  
 Source: Ericsson*

**Abstract:**

Thsi contrinution is a work plan related to the introduction of band n68

Chair: encourage companies to follow the work plan in this tdoc.

CATT: there is typo.

**Decision: Noted.**

#### 7.16.2 System parameters and UE RF requirements

[**R4-2411201**](file:///D:\RAN4%23112\Docs\R4-2411201.zip) **Band n68 - UE RF requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is giving an overview of the UE RF impacts when introducing NR band n68

**Decision: Noted.**

[**R4-2411633**](file:///D:\RAN4%23112\Docs\R4-2411633.zip) **Introduction of NR band n68**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Qualcomm Technologies Int*

**Abstract:**

In this paper we present our views on the work that needs to be done to introduce NR band n68

**Decision: Noted.**

[**R4-2411900**](file:///D:\RAN4%23112\Docs\R4-2411900.zip) **Systems parameters and RF requirements of n68**

*Type: other For: Approval  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2411946**](file:///D:\RAN4%23112\Docs\R4-2411946.zip) **NR band n68 system parameters**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

**Draft CR**

38.101-1

[**R4-2411206**](file:///D:\RAN4%23112\Docs\R4-2411206.zip) **Draft CR to 38.101-1 - Introduction of band n68**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 38.101-1 for the introduction of band n68

**Decision: Postponed.**

[**R4-2411914**](file:///D:\RAN4%23112\Docs\R4-2411914.zip) **(NR\_band\_n68-Core) Draft CR to TS38.101-1: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

#### 7.16.3 BS RF core requirements

[**R4-2411200**](file:///D:\RAN4%23112\Docs\R4-2411200.zip) **Band n68 - BS RF requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is giving an overview of the BS RF impacts when introducing NR band n68

**Decision: Postponed.**

**Draft CR**

38.104

[**R4-2411205**](file:///D:\RAN4%23112\Docs\R4-2411205.zip) **Draft CR to 38.104 - Introduction of band n68**

*Type: draftCR For: Endorsement  
 38.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 38.104 for the introduction of band n68

**Decision: Postponed.**

[**R4-2411915**](file:///D:\RAN4%23112\Docs\R4-2411915.zip) **(NR\_band\_n68-Core) Draft CR to TS38.104: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 38.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

[**R4-2413114**](file:///D:\RAN4%23112\Docs\R4-2413114.zip) **draftCR to 38.104 on introduction of Band n68**

*Type: draftCR For: Endorsement  
 38.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

38.141-1

[**R4-2411207**](file:///D:\RAN4%23112\Docs\R4-2411207.zip) **Draft CR to 38.141-1 - Introduction of band n68**

*Type: draftCR For: Endorsement  
 38.141-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 38.141-1 for the introduction of band n68

**Decision: Postponed.**

[**R4-2411916**](file:///D:\RAN4%23112\Docs\R4-2411916.zip) **(NR\_band\_n68-Perf) Draft CR to TS38.141-1: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 38.141-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

[**R4-2413115**](file:///D:\RAN4%23112\Docs\R4-2413115.zip) **draftCR to 38.141-1 on introduction of Band n68**

*Type: draftCR For: Endorsement  
 38.141-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

38.141-2

[**R4-2411208**](file:///D:\RAN4%23112\Docs\R4-2411208.zip) **Draft CR to 38.141-2 - Introduction of band n68**

*Type: draftCR For: Endorsement  
 38.141-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 38.141-2 for the introduction of band n68

**Decision: Postponed.**

[**R4-2411917**](file:///D:\RAN4%23112\Docs\R4-2411917.zip) **(NR\_band\_n68-Perf) Draft CR to TS38.141-2: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 38.141-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

[**R4-2413116**](file:///D:\RAN4%23112\Docs\R4-2413116.zip) **draftCR to 38.141-2 on introduction of Band n68**

*Type: draftCR For: Endorsement  
 38.141-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

38.106

[**R4-2411918**](file:///D:\RAN4%23112\Docs\R4-2411918.zip) **(NR\_band\_n68-Core) Draft CR to TS38.106: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 38.106 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.176-1

[**R4-2411919**](file:///D:\RAN4%23112\Docs\R4-2411919.zip) **(NR\_band\_n68-Perf) Draft CR to TS38.176-1: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 38.176-1 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.176-2

[**R4-2411920**](file:///D:\RAN4%23112\Docs\R4-2411920.zip) **(NR\_band\_n68-Perf) Draft CR to TS38.176-2: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 38.176-2 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.115-1

[**R4-2411921**](file:///D:\RAN4%23112\Docs\R4-2411921.zip) **(NR\_band\_n68-Perf) Draft CR to TS38.115-1: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 38.115-1 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.174

[**R4-2411922**](file:///D:\RAN4%23112\Docs\R4-2411922.zip) **(NR\_band\_n68-Core) Draft CR to TS38.174: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 38.174 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

38.145-1

[**R4-2411923**](file:///D:\RAN4%23112\Docs\R4-2411923.zip) **(NR\_band\_n68-Perf) Draft CR to TS37.145-1: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 37.145-1 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

37.145-2

[**R4-2411924**](file:///D:\RAN4%23112\Docs\R4-2411924.zip) **(NR\_band\_n68-Perf) Draft CR to TS37.145-2: Introduction of NR band n68**

*Type: draftCR For: Endorsement  
 37.145-2 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

36.104

[**R4-2411202**](file:///D:\RAN4%23112\Docs\R4-2411202.zip) **Draft CR to 36.104 - Introduction of band n68**

*Type: draftCR For: Endorsement  
 36.104 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 36.104 for the introduction of band n68

**Decision: Postponed.**

[**R4-2413110**](file:///D:\RAN4%23112\Docs\R4-2413110.zip) **draftCR to 36.104 on introduction of Band n68**

*Type: draftCR For: Endorsement  
 36.104 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

36.141

[**R4-2413111**](file:///D:\RAN4%23112\Docs\R4-2413111.zip) **draftCR to 36.141 on introduction of Band n68**

*Type: draftCR For: Endorsement  
 36.141 v18.4.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

37.104

[**R4-2411203**](file:///D:\RAN4%23112\Docs\R4-2411203.zip) **Draft CR to 37.104 - Introduction of band n68**

*Type: draftCR For: Endorsement  
 37.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 37.104 for the introduction of band n68

**Decision: Postponed.**

[**R4-2413112**](file:///D:\RAN4%23112\Docs\R4-2413112.zip) **draftCR to 37.104 on introduction of Band n68**

*Type: draftCR For: Endorsement  
 37.104 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

37.141

[**R4-2413113**](file:///D:\RAN4%23112\Docs\R4-2413113.zip) **draftCR to 37.141 on introduction of Band n68**

*Type: draftCR For: Endorsement  
 37.141 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Nokia*

**Decision: Postponed.**

37.105

[**R4-2411204**](file:///D:\RAN4%23112\Docs\R4-2411204.zip) **Draft CR to 37.105 - Introduction of band n68**

*Type: draftCR For: Endorsement  
 37.105 v18.5.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 37.105 for the introduction of band n68

**Decision: Postponed.**

#### 7.16.4 RRM core requirements

[**R4-2411209**](file:///D:\RAN4%23112\Docs\R4-2411209.zip) **Draft CR to 38.133 - Introduction of band n68**

*Type: draftCR For: Endorsement  
 38.133 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

This is draft CR to TS 38.133 for the introduction of band n68

**Decision: Postponed.**

[**R4-2412396**](file:///D:\RAN4%23112\Docs\R4-2412396.zip) **draft CR to TS 38.133: Introduction of NR Band n68**

*Type: draftCR For: Endorsement  
 38.133 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision: Postponed.**

### 7.17 Introduction of NR-NTN S-band (MSS band 2000-2020 MHz UL and 2180-2200 MHz DL)

#### 7.17.1 General aspects

**Work plan**

[**R4-2413146**](file:///D:\RAN4%23112\Docs\R4-2413146.zip) **Workplan for new NR NTN S-band**

*Type: Work Plan For: Approval  
 Source: Qualcomm Incorporated*

**Decision:** The document was **not treated**.

[**R4-2411303**](file:///D:\RAN4%23112\Docs\R4-2411303.zip) **NTN MSS S-band band plan, regulations, and deployment scenarios**

*Type: discussion For: Discussion  
 Source: EchoStar, Dish Network, TerreStar, Thales, Gatehouse, Novamint*

**Decision: Noted.**

#### 7.17.2 System parameters and UE RF requirements

[**R4-2411059**](file:///D:\RAN4%23112\Docs\R4-2411059.zip) **Discussion on UE RF requirements for the NTN new S-band**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411196**](file:///D:\RAN4%23112\Docs\R4-2411196.zip) **New NTN S-band - System parameters and UE RF requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses the system parameters and the impacts on UE RF requirements when introducing the new NTN S-band

**Decision: Noted.**

[**R4-2411842**](file:///D:\RAN4%23112\Docs\R4-2411842.zip) **Discussion on system parameters and UE RF requirements for NR-NTN S band**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412959**](file:///D:\RAN4%23112\Docs\R4-2412959.zip) **Discussion on the NTN S band definition**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413147**](file:///D:\RAN4%23112\Docs\R4-2413147.zip) **Co-existence considerations for the new S-band**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

[**R4-2413305**](file:///D:\RAN4%23112\Docs\R4-2413305.zip) **Coexistence between S-Band NTN and Terrestrial Networks**

*Type: other For: Approval  
 Source: T-Mobile USA*

**Decision: Noted.**

**Draft CR**

38.101-5

[**R4-2411060**](file:///D:\RAN4%23112\Docs\R4-2411060.zip) **DraftCR for TS 38.101-5, Introduction on system parameters for UE supporting new S Band**

*Type: draftCR For: Endorsement  
 38.101-5 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: CATT*

**Decision:** The document was **not treated**.

#### 7.17.3 SAN RF core requirements

[**R4-2411058**](file:///D:\RAN4%23112\Docs\R4-2411058.zip) **Discussion on SAN RF requirements for the NTN new S-band**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411195**](file:///D:\RAN4%23112\Docs\R4-2411195.zip) **New NTN S-band - SAN RF requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses the impact on SAN RF requirements when introducing the new NTN S-band

**Decision: Noted.**

[**R4-2411843**](file:///D:\RAN4%23112\Docs\R4-2411843.zip) **Discussion on SAN RF requirements for NR-NTN S band**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

Draft CR

38.108

[**R4-2411061**](file:///D:\RAN4%23112\Docs\R4-2411061.zip) **DraftCR for TS 38.108, Introduction on system parameters for SAN supporting new S Band**

*Type: draftCR For: Endorsement  
 38.108 v18.3.0 CR- rev Cat: B (Rel-19)  
  
 Source: CATT*

**Decision:** The document was **not treated**.

[**R4-2411844**](file:///D:\RAN4%23112\Docs\R4-2411844.zip) **draftCR to TS38.108 Introduction of NR-NTN S band**

*Type: draftCR For: Endorsement  
 38.108 v18.3.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

#### 7.17.4 RRM core requirements

### 7.18 Introduction of IoT-NTN S-band (MSS band 2000-2020 MHz UL and 2180-2200 MHz DL)

#### 7.18.1 General aspects

**Work plan**

[**R4-2411547**](file:///D:\RAN4%23112\Docs\R4-2411547.zip) **Work plan for an IoT-NTN S-band for North America (MSS band 2000-2020 MHz UL and 2180-2200 MHz DL)**

*Type: Work Plan For: Approval  
 Source: Mediatek India Technology Pvt.*

**Decision:** The document was **not treated**.

[**R4-2411304**](file:///D:\RAN4%23112\Docs\R4-2411304.zip) **NTN MSS S-band band plan, regulations, and deployment scenarios**

*Type: discussion For: Discussion  
 Source: EchoStar, DISH Network, TerreStar, Thales, Gatehouse, Novamint*

**Decision: Noted.**

[**R4-2412460**](file:///D:\RAN4%23112\Docs\R4-2412460.zip) **Discussion on NTN-TN UE-coexistence issue for an IoT-NTN S-band (MSS band 2000-2020 MHz UL and 2180-2200 MHz DL)**

*Type: discussion For: Discussion  
 Source: Mediatek India Technology Pvt.*

**Decision: Noted.**

#### 7.18.2 System parameters and UE RF requirements

[**R4-2411548**](file:///D:\RAN4%23112\Docs\R4-2411548.zip) **Discussion on IoT-NTN S-band (MSS band 2000-2020 MHz UL and 2180-2200 MHz DL) UE RF requirements**

*Type: discussion For: Discussion  
 Source: Mediatek India Technology Pvt.*

**Decision: Noted.**

[**R4-2411845**](file:///D:\RAN4%23112\Docs\R4-2411845.zip) **Discussion on system parameters and UE RF requirements for IoT-NTN S band**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

#### 7.18.3 SAN RF core requirements

[**R4-2411846**](file:///D:\RAN4%23112\Docs\R4-2411846.zip) **Discussion on SAN RF requirements for IoT-NTN S band**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

**Draft CR**

36.108

[**R4-2411847**](file:///D:\RAN4%23112\Docs\R4-2411847.zip) **draftCR to TS36.108 Introduction of IoT-NTN S band**

*Type: draftCR For: Endorsement  
 36.108 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

#### 7.18.4 RRM core requirements

### 7.19 Introduction of new NR NTN bands to support the Extended L-band (UL 1668-1675MHz, DL 1518-1525MHz) and the combined MSS L-band and Extended L-band ranges (DL 1518-1559 MHz, UL 1626.5-1660.5 MHz and 1668-1675 MHz)

#### 7.19.1 General aspects

[**R4-2411550**](file:///D:\RAN4%23112\Docs\R4-2411550.zip) **MSS L-band and Extended L-band band plan and background**

*Type: discussion For: Discussion  
 Source: Inmarsat, Viasat*

**Decision: Noted.**

#### 7.19.2 System parameters and UE RF requirements

[**R4-2411263**](file:///D:\RAN4%23112\Docs\R4-2411263.zip) **Initial considerations on the band plan for the combined L-band and extended L-band**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411848**](file:///D:\RAN4%23112\Docs\R4-2411848.zip) **Discussion on system parameters and UE RF requirements for NR-NTN combined L-band**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412958**](file:///D:\RAN4%23112\Docs\R4-2412958.zip) **Discussion on the full NTN L band definition**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

#### 7.19.3 SAN RF core requirements

[**R4-2411849**](file:///D:\RAN4%23112\Docs\R4-2411849.zip) **Discussion on SAN RF requirements for NR-NTN combined L-band**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

**Draft CR**

38.108

[**R4-2411850**](file:///D:\RAN4%23112\Docs\R4-2411850.zip) **draftCR to TS38.108 Introduction of NR-NTN combined L-band**

*Type: draftCR For: Endorsement  
 38.108 v18.3.0 CR- rev Cat: B (Rel-19)  
  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

#### 7.19.4 RRM core requirements

### 7.20 Introduction of Power Class 2 and UE 40MHz Channel Bandwidth in NR band n28

#### 7.20.1 General and work plan

**Work plan**

[**R4-2411741**](file:///D:\RAN4%23112\Docs\R4-2411741.zip) **Work plan of WID on Introduction of Power Class 2 and UE 40MHz Channel Bandwidth in NR band n28**

*Type: Work Plan For: Approval  
 Source: CMCC*

Chair: encourage the companies to follow the work plan.

**Decision: Noted.**

[**R4-2413027**](file:///D:\RAN4%23112\Docs\R4-2413027.zip) **On Rel-19 work for band n28**

*Type: Work Plan For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2411291**](file:///D:\RAN4%23112\Docs\R4-2411291.zip) **Discussion on introduction of Power Class 2 and UE 40MHz CBW in n28**

*Type: discussion For: Discussion  
 Source: KDDI Corporation*

**Decision: Noted.**

#### 7.20.2 UE RF requirements for PC2 with UL-MIMO

[**R4-2411116**](file:///D:\RAN4%23112\Docs\R4-2411116.zip) **On UE RF requirements for PC2 with UL-MIMO for n28**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411154**](file:///D:\RAN4%23112\Docs\R4-2411154.zip) **On PC2 for n28**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411742**](file:///D:\RAN4%23112\Docs\R4-2411742.zip) **UE RF requirements for n28 PC2**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411879**](file:///D:\RAN4%23112\Docs\R4-2411879.zip) **Discussion on PC2 n28 40MHz**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412042**](file:///D:\RAN4%23112\Docs\R4-2412042.zip) **n28 NS\_17 and NS\_18 A-MPR simulations**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

[**R4-2412083**](file:///D:\RAN4%23112\Docs\R4-2412083.zip) **Discussion on PC2 with UL-MIMO for n28**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2413061**](file:///D:\RAN4%23112\Docs\R4-2413061.zip) **n28 PC2 NS\_17 A-MPR**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This paper presents PA back-off measurements for band n28 PC2 NS\_17. [MCC]: Move [R4-2413061](file:///D:\RAN4%23112\Docs\R4-2413061.zip) from AI 7.5.3.1 to AI 7.20.2, and treat it in [115].

**Decision: Noted.**

#### 7.20.3 UE RF requirements for introducing 40MHz

[**R4-2411117**](file:///D:\RAN4%23112\Docs\R4-2411117.zip) **on UE RF requirements for introducing 40MHz channel bandwidth for n28**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411155**](file:///D:\RAN4%23112\Docs\R4-2411155.zip) **On 40MHz CBW for n28**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411476**](file:///D:\RAN4%23112\Docs\R4-2411476.zip) **REFSENS and RSD for n28 UL 40MHz**

*Type: discussion For: Discussion  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

[**R4-2411671**](file:///D:\RAN4%23112\Docs\R4-2411671.zip) **40 MHz channel bandwidth with PC2 in Band n28**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

In this contribution we consider deployment of 40 MHz bandwidth with PC2 in n28, regulatory aspects and bandwidth flexibility.

**Decision: Noted.**

[**R4-2411743**](file:///D:\RAN4%23112\Docs\R4-2411743.zip) **UE RF requirements for introducing 40MHz**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411878**](file:///D:\RAN4%23112\Docs\R4-2411878.zip) **Discussion on PC3 n28 40MHz**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2411947**](file:///D:\RAN4%23112\Docs\R4-2411947.zip) **Discussion on UE 40MHz channel bandwidth for NR band n28**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412084**](file:///D:\RAN4%23112\Docs\R4-2412084.zip) **Discussion on introducing 40MHz for n28**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2413062**](file:///D:\RAN4%23112\Docs\R4-2413062.zip) **n28 40MHz PC2 PC3 REFSENS**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This paper presents PA emission measurements to evaluate the Band n28 40MHz PC3 PC2 REFSENS requirements.

**Decision: Noted.**

[**R4-2413149**](file:///D:\RAN4%23112\Docs\R4-2413149.zip) **UE RF requirements for PC2 and 40 MHz**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

#### 7.20.4 Moderator summary and conclusions

## 8 Rel-19 on-going non-spectrum related work items

### 8.1 UE RF enhancements for NR FR1/FR2 and EN-DC, Phase 4

#### 8.1.1 UE RF requirements

##### 8.1.1.1 High power UE (HPUE) for CA in terrestrial network (TN)

[**R4-2412432**](file:///D:\RAN4%23112\Docs\R4-2412432.zip) **Views on SAR Solution**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

###### 8.1.1.1.1 Intra-band contiguous and non-contiguous UL CA with PC1.5

[**R4-2411168**](file:///D:\RAN4%23112\Docs\R4-2411168.zip) **MPR for PC1.5 intra-band contiguous UL CA**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2411302**](file:///D:\RAN4%23112\Docs\R4-2411302.zip) **On equal PSD vs equal power spectral regrowth**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, further developing from our contribution [1] in RAN#111, we address the power limitations and the MPR validity under equal PSD and equal power sharing.

**Decision: Noted.**

[**R4-2411315**](file:///D:\RAN4%23112\Docs\R4-2411315.zip) **Views on HPUE intra-band CA**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2411595**](file:///D:\RAN4%23112\Docs\R4-2411595.zip) **Discussion on PC1.5 TDD intra-band CA**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411646**](file:///D:\RAN4%23112\Docs\R4-2411646.zip) **On PC1.5 intra-band contiguous ULCA with 2Tx**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

PC1.5 intra-band ULCA feature for both contiguous and non-contiguous cases is an objective for Rel-19. In this contribution, further developing from our contribution in RAN#111, we address the MPR requirement for PC1.5 contiguous ULCA based on 2Tx architecture.

**Decision: Noted.**

[**R4-2411648**](file:///D:\RAN4%23112\Docs\R4-2411648.zip) **High power UE RF requirements for intra-band CA in TN**

*Type: discussion For: Discussion  
 Source: Meta Ireland*

**Abstract:**

In this paper, we suggest how to define the RF requirements for high power UE for intra-band contiguous CA i.e. n41C, n77C and other intra-band non-contiguous CA i.e. CA\_n78(2A), CA\_n77(2A).

**Decision: Noted.**

[**R4-2411672**](file:///D:\RAN4%23112\Docs\R4-2411672.zip) **Framework for intra-band UL CA with PC1.5**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose a framework for MPR for intra-band contiguous and non-contiguous CA with PC1.5, MPR applicability is also discussed.

**Decision: Noted.**

[**R4-2411882**](file:///D:\RAN4%23112\Docs\R4-2411882.zip) **Further discussion on R19 PC1.5 Intra-band UL CA**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412024**](file:///D:\RAN4%23112\Docs\R4-2412024.zip) **HPUE for intra-band UL CA**

*Type: discussion For: Discussion  
 Source: LG Electronics Finland*

**Abstract:**

In this paper, we provide our views on HPUE for intra-band contiguous/non-contiguous UL CA.

**Decision: Noted.**

[**R4-2412073**](file:///D:\RAN4%23112\Docs\R4-2412073.zip) **Further discussion on HPUE for intra-band contiguous and non-contiguous CA**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412277**](file:///D:\RAN4%23112\Docs\R4-2412277.zip) **On PC1.5 intra-band non-contiguous ULCA with dualPA**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

PC1.5 intra-band ULCA feature for both contiguous and non-contiguous cases. is introduced in Rel-19. In this contribution, further developing from our contribution in RAN#111, we address in particular the MPR requirement for PC1.5 non-contiguous ULCA based on dualPA architecture.

**Decision: Noted.**

[**R4-2412349**](file:///D:\RAN4%23112\Docs\R4-2412349.zip) **R19 MPR for PC1.5 contiguous CA**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2412350**](file:///D:\RAN4%23112\Docs\R4-2412350.zip) **R19 MPR for PC1.5 NC CA**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2413028**](file:///D:\RAN4%23112\Docs\R4-2413028.zip) **Discussion on PC1.5 for intra-band CA**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413400**](file:///D:\RAN4%23112\Docs\R4-2413400.zip) **RF requirements for HPUE for CA terrestrial networks**

*Type: discussion For: Discussion  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Qualcomm Technologies Int*

**Abstract:**

In this paper we present details on the MPR measurements done to date on contiguous CC with contiguous RBs

**Decision: Noted.**

###### 8.1.1.1.2 Inter-band UL NR-CA/EN-DC with 2 bands and 2Tx and/or 3Tx

[**R4-2411169**](file:///D:\RAN4%23112\Docs\R4-2411169.zip) **Rel-19 HPUE for inter-band UL CA/EN-DC with 2Tx or 3Tx**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2411316**](file:///D:\RAN4%23112\Docs\R4-2411316.zip) **Views on HPUE inter-band CA with 2Tx or 3Tx**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2411596**](file:///D:\RAN4%23112\Docs\R4-2411596.zip) **Discussion on PC1.5 UE for two band NR inter-band uplink CA**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411649**](file:///D:\RAN4%23112\Docs\R4-2411649.zip) **High power inter-band CA/DC UE RF requirements including 2Tx/3Tx within 2 bands**

*Type: discussion For: Discussion  
 Source: Meta Ireland*

**Abstract:**

In this paper, we propose how to define the RF requirements for high power CA/DC UE for inter-band including 2Tx/3Tx.

**Decision: Noted.**

[**R4-2411869**](file:///D:\RAN4%23112\Docs\R4-2411869.zip) **HPUE for inter-band UL CA and EN-DC**

*Type: discussion For: Discussion  
 Source: LG Electronics*

**Abstract:**

It disscuses HPUE RF requirements for inter-band UL CA and EN-DC.

**Decision: Noted.**

[**R4-2411881**](file:///D:\RAN4%23112\Docs\R4-2411881.zip) **Further discussion on R19 2Tx/3Tx PC2/1.5 Inter-band NR CA/ENDC**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412007**](file:///D:\RAN4%23112\Docs\R4-2412007.zip) **UE RF Enh 4: On necessity of additional MSD requirement for HPUE**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412092**](file:///D:\RAN4%23112\Docs\R4-2412092.zip) **Discussion on UL inter-band UL CA or DC with 2Tx or 3Tx**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412264**](file:///D:\RAN4%23112\Docs\R4-2412264.zip) **Discussion on SAR solutions for new Rel-19 inter-band EN-DC HPUE scenarios**

*Type: discussion For: Discussion  
 Source: CHTTL*

**Decision: Noted.**

[**R4-2412619**](file:///D:\RAN4%23112\Docs\R4-2412619.zip) **MSD for HPUE**

*Type: other For: Approval  
 Source: Qualcomm France*

**Abstract:**

Considerations on MSD for HPUE is provided in this contribution.

**Decision: Noted.**

###### 8.1.1.1.3 Increasing UE transmission high power limit

[**R4-2411170**](file:///D:\RAN4%23112\Docs\R4-2411170.zip) **On Rel-19 increasing UE transmission high power limit**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2411317**](file:///D:\RAN4%23112\Docs\R4-2411317.zip) **Views on Increasing higher power limit feature**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2411597**](file:///D:\RAN4%23112\Docs\R4-2411597.zip) **Discussion on increasing high power limit for inter-band CA DC with 2Tx and or 3Tx**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411870**](file:///D:\RAN4%23112\Docs\R4-2411870.zip) **HPUE for increasing high power limit**

*Type: discussion For: Discussion  
 Source: LG Electronics*

**Abstract:**

It disscuses HPUE RF requirements for increasing high power limit.

**Decision: Noted.**

[**R4-2411880**](file:///D:\RAN4%23112\Docs\R4-2411880.zip) **Further discussion on R19 Increasing UE transmission power limit**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412008**](file:///D:\RAN4%23112\Docs\R4-2412008.zip) **UE RF Enh 4: Increasing UE transmission power**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412093**](file:///D:\RAN4%23112\Docs\R4-2412093.zip) **Discussion on increasing transmission high power limit for CA HPUE**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412675**](file:///D:\RAN4%23112\Docs\R4-2412675.zip) **Discussion on MSD rules and UE types for HPUE CA**

*Type: discussion For: Discussion  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

[**R4-2413029**](file:///D:\RAN4%23112\Docs\R4-2413029.zip) **Discussion on Increasing UE transmission high power limit**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413225**](file:///D:\RAN4%23112\Docs\R4-2413225.zip) **On wider applicability of higherPowerLimit-r17**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

For Rel-19, applicability should be the rule rather than the exception.

**Decision: Noted.**

**Withdrawn**

[**R4-2411673**](file:///D:\RAN4%23112\Docs\R4-2411673.zip) **On the higher power limit with PC1.5 band capability**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

In this contribution we consider the specification of transmitter and MSD requirements with the higher power limit and PC1.5 band capability. MCC: This was not made available at tdoc submission deadline.

**Decision:** The document was **not treated**.

##### 8.1.1.2 Power domain enhancement for NR single carrier and NR intra-band UL CA for PC2 and PC3

###### 8.1.1.2.1 Power domain enhancements for single carrier

[**R4-2411108**](file:///D:\RAN4%23112\Docs\R4-2411108.zip) **Further discussion on power domain enhancements for single carrier**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411153**](file:///D:\RAN4%23112\Docs\R4-2411153.zip) **On Rel-19 power domain enhancement**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411326**](file:///D:\RAN4%23112\Docs\R4-2411326.zip) **Discussion on MPR reduction for FR1 single carrier**

*Type: discussion For: Discussion  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Samsung*

**Decision: Noted.**

[**R4-2411535**](file:///D:\RAN4%23112\Docs\R4-2411535.zip) **Further Views on MPR Reduction**

*Type: discussion For: Discussion  
 Source: Sony*

**Decision: Noted.**

[**R4-2411601**](file:///D:\RAN4%23112\Docs\R4-2411601.zip) **Discussion on power domain enhancement for single carrier**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411631**](file:///D:\RAN4%23112\Docs\R4-2411631.zip) **Power boosting and MPR reduction**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Qualcomm Technologies Int*

**Abstract:**

We present further views on the UE allocated BW scenarios that should be studied for this topic

**Decision: Noted.**

[**R4-2411674**](file:///D:\RAN4%23112\Docs\R4-2411674.zip) **Power domain enhancements for single carrier**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we consider the changes of the unwanted emissions requirements and MPR reductions for a single carrier

**Decision: Noted.**

[**R4-2411851**](file:///D:\RAN4%23112\Docs\R4-2411851.zip) **Discussion on power domain enhancements for single carrier**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412009**](file:///D:\RAN4%23112\Docs\R4-2412009.zip) **UE RF Enh 4: Power domain enhancements for single carrier**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412085**](file:///D:\RAN4%23112\Docs\R4-2412085.zip) **Discussion on power domain enhancements for NR single carrier**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412351**](file:///D:\RAN4%23112\Docs\R4-2412351.zip) **R19 MPR reduction for single carrier**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2412433**](file:///D:\RAN4%23112\Docs\R4-2412433.zip) **Views on Power domain enhancements for single carrier**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

[**R4-2412553**](file:///D:\RAN4%23112\Docs\R4-2412553.zip) **Discussion on power domain enhancement for NR single carrier**

*Type: discussion For: Discussion  
 Source: MediaTek (Wuhan) Inc.*

**Decision: Noted.**

[**R4-2412568**](file:///D:\RAN4%23112\Docs\R4-2412568.zip) **On power domain enhancements for single carrier**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412579**](file:///D:\RAN4%23112\Docs\R4-2412579.zip) **On reduced MPR when BS CBW is larger than UE CBW**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Release 19 power domain enhancement covers the MPR reduction for the case where the UE CBW is smaller than the BS CBW. In this contribution, further developing from our contribution in RAN4#111, we propose a simple way reusing the inner/outer MPR concept

**Decision: Noted.**

[**R4-2413457**](file:///D:\RAN4%23112\Docs\R4-2413457.zip) **Discussion on Power domain enhancements for single carrier**

*Type: discussion For: Discussion  
 Source: LG Electronics UK*

**Decision: Noted.**

###### 8.1.1.2.2 MPR applicability for FR1 intra-band UL CA

[**R4-2411049**](file:///D:\RAN4%23112\Docs\R4-2411049.zip) **On improved MPR for intra-band ULCA when only one CC has RBs allocated**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we address in particular whether the emissions requirement should be based on a single CC or on the configured ULCA to enable the use of the single CC MPR when only one CC has active RBs

**Decision: Noted.**

[**R4-2411109**](file:///D:\RAN4%23112\Docs\R4-2411109.zip) **Further discussion on MPR applicability for FR1 intra-band UL CA**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411327**](file:///D:\RAN4%23112\Docs\R4-2411327.zip) **Discussion on MPR reduction for FR1 intra-band UL CA**

*Type: discussion For: Discussion  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Samsung*

**Decision: Noted.**

[**R4-2411632**](file:///D:\RAN4%23112\Docs\R4-2411632.zip) **MPR applicability for FR1 intra-band UL CA**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Qualcomm Technologies Int*

**Abstract:**

We present further views on issues on MPR selection for contiguous and non-contiguous scenarios with 1 active CC

**Decision: Noted.**

[**R4-2411675**](file:///D:\RAN4%23112\Docs\R4-2411675.zip) **MPR applicability for non-contiguous UL CA in fragmented spectrum**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose changes to MPR with activated and deactivated cells among configured cells for FR1

**Decision: Noted.**

[**R4-2411852**](file:///D:\RAN4%23112\Docs\R4-2411852.zip) **Discussion on MPR applicability for FR1 intra-band UL CA**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412086**](file:///D:\RAN4%23112\Docs\R4-2412086.zip) **Discussion on MPR applicability for FR1 intra-band UL CA**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412569**](file:///D:\RAN4%23112\Docs\R4-2412569.zip) **On MPR applicability for FR1 intra-band UL CA**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413456**](file:///D:\RAN4%23112\Docs\R4-2413456.zip) **Discussion on MPR applicability for FR1 intra-band UL CA**

*Type: discussion For: Discussion  
 Source: LG Electronics UK*

**Decision: Noted.**

**Draft CR**

[**R4-2411314**](file:///D:\RAN4%23112\Docs\R4-2411314.zip) **Draft Rel-19 CR on MPR applicability for intra-band contiguous CA with single CC with activated cell**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Samsung*

**Decision:** The document was **not treated**.

**Withdrawn**

[**R4-2412010**](file:///D:\RAN4%23112\Docs\R4-2412010.zip) **R19 UE RF Enh 4 MPR applicability for FR1 intra-band UL CA**

*Type: other For: Approval  
 Source: Nokia*

**Decision:** The document was **not treated**.

###### 8.1.1.2.3 MPR applicability for FR2

[**R4-2411110**](file:///D:\RAN4%23112\Docs\R4-2411110.zip) **Further discussion on MPR applicability for FR2**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411693**](file:///D:\RAN4%23112\Docs\R4-2411693.zip) **Discussion on MPR reduction for FR2 CA**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2411853**](file:///D:\RAN4%23112\Docs\R4-2411853.zip) **Discussion on MPR applicability for FR2**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412356**](file:///D:\RAN4%23112\Docs\R4-2412356.zip) **Discussion on FR2 CA MPR improvement**

*Type: discussion For: Discussion  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

[**R4-2412570**](file:///D:\RAN4%23112\Docs\R4-2412570.zip) **On MPR applicability for FR2 CA**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413226**](file:///D:\RAN4%23112\Docs\R4-2413226.zip) **Activation-based FR2 MPR enhancement**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

We propose conditions for applicability of activated-CC-based MPR

**Decision: Noted.**

##### 8.1.1.3 6Rx UE

###### 8.1.1.3.1 Reference sensitivity requirements

[**R4-2411456**](file:///D:\RAN4%23112\Docs\R4-2411456.zip) **Discussion on reference sensitivity requirements for 6RX UE**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2411497**](file:///D:\RAN4%23112\Docs\R4-2411497.zip) **Discussion on NR 6RX UE RF REFSENS requirements**

*Type: discussion For: Discussion  
 Source: Mediatek India Technology Pvt.*

**Decision: Noted.**

[**R4-2411608**](file:///D:\RAN4%23112\Docs\R4-2411608.zip) **Discussion on reference sensitivity requirements for 6Rx UE**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411647**](file:///D:\RAN4%23112\Docs\R4-2411647.zip) **Discussion on 6Rx REFSENS and other RF requirements for single carrier**

*Type: discussion For: Discussion  
 Source: Meta Ireland*

**Abstract:**

In this paper, we discuss on the 6Rx sensitivity level, SRS switching capability and SRS switching insertion loss.

**Decision: Noted.**

[**R4-2411883**](file:///D:\RAN4%23112\Docs\R4-2411883.zip) **Further discussion on 6Rx Reference sensitivity requirements**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412011**](file:///D:\RAN4%23112\Docs\R4-2412011.zip) **UE RF Enh 4: 6Rx for handheld and FWA dRib**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412074**](file:///D:\RAN4%23112\Docs\R4-2412074.zip) **Further discussion on 6Rx REFSENS requirements for FWA and Handheld UE**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412405**](file:///D:\RAN4%23112\Docs\R4-2412405.zip) **Discussion for 6 Rx REFSENS**

*Type: discussion For: Discussion  
 Source: LG Electronics France*

**Decision: Noted.**

[**R4-2412571**](file:///D:\RAN4%23112\Docs\R4-2412571.zip) **On 6Rx reference sensitivity requirements for FR1 UE**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412610**](file:///D:\RAN4%23112\Docs\R4-2412610.zip) **6Rx REFSENS**

*Type: other For: Approval  
 Source: Qualcomm France*

**Abstract:**

Analysis and considerations 6Rx REFSENS are provided in this contribution.

**Decision: Noted.**

[**R4-2412925**](file:///D:\RAN4%23112\Docs\R4-2412925.zip) **Discussion on REFSENS requirement for 6Rx UE**

*Type: discussion For: Discussion  
 Source: Google*

**Decision: Noted.**

[**R4-2413268**](file:///D:\RAN4%23112\Docs\R4-2413268.zip) **Discussion on reference sensitivity for 6Rx**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This paper will discuss the objectives specified in the WI with a focus on the 6Rx reference sensitivity.

**Decision: Noted.**

###### 8.1.1.3.2 MIMO layer evaluation for 6Rx UE

[**R4-2411393**](file:///D:\RAN4%23112\Docs\R4-2411393.zip) **Views on Maximum Number of MIMO Layers for 6Rx Ues**

*Type: discussion For: Discussion  
 38.101-4 v CR- rev Cat: (Rel-19)  
  
 Source: Apple*

**Decision: Noted.**

[**R4-2411525**](file:///D:\RAN4%23112\Docs\R4-2411525.zip) **Discussion on MIMO layer evaluation for 6Rx UE**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

[**R4-2411609**](file:///D:\RAN4%23112\Docs\R4-2411609.zip) **MIMO layer evaluation for 6Rx UE**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411680**](file:///D:\RAN4%23112\Docs\R4-2411680.zip) **Discussion on the demodulation performance requirements for 6Rx devices**

*Type: discussion For: Discussion  
 Source: QUALCOMM Europe Inc. - Spain*

**Decision: Noted.**

[**R4-2411773**](file:///D:\RAN4%23112\Docs\R4-2411773.zip) **Feasibility evaluation of MIMO layer for 6Rx UE**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

[**R4-2412075**](file:///D:\RAN4%23112\Docs\R4-2412075.zip) **Simulation results of MIMO layer evaluation for 6Rx UE**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2412352**](file:///D:\RAN4%23112\Docs\R4-2412352.zip) **R19 Simulation results of 6Layer performance**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2412572**](file:///D:\RAN4%23112\Docs\R4-2412572.zip) **On MIMO layer evaluation for 6Rx UE**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412877**](file:///D:\RAN4%23112\Docs\R4-2412877.zip) **Discussion and initial simulation results on MIMO layer evaluation for 6Rx UE**

*Type: discussion For: Discussion  
 38.101-4 v CR- rev Cat: (Rel-18)  
  
 Source: Samsung*

**Decision: Noted.**

[**R4-2412928**](file:///D:\RAN4%23112\Docs\R4-2412928.zip) **Discussion on MIMO layer for 6Rx UE**

*Type: discussion For: Discussion  
 Source: Google*

**Decision: Noted.**

[**R4-2413269**](file:///D:\RAN4%23112\Docs\R4-2413269.zip) **Discussion on the support of MIMO layers for 6Rx UE**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This paper will discuss the objectives specified in the WI with a focus on the 6Rx MIMO layers.

**Decision: Noted.**

###### 8.1.1.3.3 SRS antenna switching requirements

[**R4-2411151**](file:///D:\RAN4%23112\Docs\R4-2411151.zip) **On the values of ?TRxSRS for 6Rx SRS antenna switching**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411457**](file:///D:\RAN4%23112\Docs\R4-2411457.zip) **Discussion on SRS antenna switching requirements for 6RX UE**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2411884**](file:///D:\RAN4%23112\Docs\R4-2411884.zip) **Further discussion on 6Rx SRS antenna switching requirements**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412076**](file:///D:\RAN4%23112\Docs\R4-2412076.zip) **Further discussion on SRS antenna switching requirements**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412406**](file:///D:\RAN4%23112\Docs\R4-2412406.zip) **Discussion for 6 Rx ?TRxSRS**

*Type: discussion For: Discussion  
 Source: LG Electronics France*

**Decision: Noted.**

[**R4-2412573**](file:///D:\RAN4%23112\Docs\R4-2412573.zip) **On 6Rx SRS antenna switching requirements**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412611**](file:///D:\RAN4%23112\Docs\R4-2412611.zip) **6Rx SRS antenna switching requirements**

*Type: other For: Approval  
 Source: Qualcomm France*

**Abstract:**

Analysis and considerations 6Rx SRS AS requirements are provided in this contribution.

**Decision: Noted.**

[**R4-2412939**](file:///D:\RAN4%23112\Docs\R4-2412939.zip) **Discussion on SRS antenna switching requirements for 6Rx UE**

*Type: discussion For: Discussion  
 Source: Google*

**Decision: Noted.**

[**R4-2413359**](file:///D:\RAN4%23112\Docs\R4-2413359.zip) **On DeltaT\_RxSRS requirement for 6Rx UE RF**

*Type: other For: Approval  
 Source: Ericsson India Private Limited*

**Decision: Noted.**

**Withdrawn**

[**R4-2411610**](file:///D:\RAN4%23112\Docs\R4-2411610.zip) **Discussion on SRS antenna switching requirements for 6Rx UE**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Abstract:**

MCC: This was not made available at tdoc submission deadline.

**Decision: Withdrawn.**

###### 8.1.1.3.4 SRS IL imbalance

[**R4-2411152**](file:///D:\RAN4%23112\Docs\R4-2411152.zip) **On SRS IL imbalance issue for 6Rx**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411458**](file:///D:\RAN4%23112\Docs\R4-2411458.zip) **Discussion on SRS IL imbalance for 6RX UE**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2411774**](file:///D:\RAN4%23112\Docs\R4-2411774.zip) **UE SRS IL imbalance issue for 6Rx UE**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

[**R4-2411885**](file:///D:\RAN4%23112\Docs\R4-2411885.zip) **Further discussion on 6Rx SRS antenna IL**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412012**](file:///D:\RAN4%23112\Docs\R4-2412012.zip) **UE RF Enh 4: 6Rx for handheld and FWA UE SRS imbalance**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412094**](file:///D:\RAN4%23112\Docs\R4-2412094.zip) **Discussion on SRS IL imbalance reporting**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412136**](file:///D:\RAN4%23112\Docs\R4-2412136.zip) **Views on SRS IL imbalance issue based on performance measurements**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2412330**](file:///D:\RAN4%23112\Docs\R4-2412330.zip) **Views on SRS insertion loss compensation and reporting enhancements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

[**R4-2412353**](file:///D:\RAN4%23112\Docs\R4-2412353.zip) **R19 Simulation results of SRS IL reporting**

*Type: other For: Discussion  
 Source: OPPO*

**Decision: Noted.**

[**R4-2412434**](file:///D:\RAN4%23112\Docs\R4-2412434.zip) **On SRS IL imbalance**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

[**R4-2412574**](file:///D:\RAN4%23112\Docs\R4-2412574.zip) **On SRS IL imbalance issue**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412966**](file:///D:\RAN4%23112\Docs\R4-2412966.zip) **Discussion on SRS IL imbalance for 6Rx UE**

*Type: discussion For: Discussion  
 Source: Google*

**Decision: Noted.**

[**R4-2413306**](file:///D:\RAN4%23112\Docs\R4-2413306.zip) **SRS Imbalance Determination with Reduced PHR Overhead**

*Type: discussion For: Approval  
 Source: Lenovo*

**Decision: Noted.**

[**R4-2413360**](file:///D:\RAN4%23112\Docs\R4-2413360.zip) **On need for SRS insertion loss imbalance reporting**

*Type: other For: Approval  
 Source: Ericsson India Private Limited*

**Decision: Noted.**

#### 8.1.2 RRM core requirements

#### 8.1.3 Moderator summary and conclusions

[**R4-2412818**](file:///D:\RAN4%23112\Docs\R4-2412818.zip) **Topic summary for [112][116] NR\_ENDC\_RF\_Ph4\_part1**

*Type: other For: Information  
 Source: Moderator(Huawei)*

**Abstract:**

Summary for AI 8.1.1.2

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

Please refer to the following hyperlinks for detailed minutes:

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_112/Inbox/Drafts/%5B112%5D%5B100%5D%20Main%20Session/1.Monday/7.%5B116%5D_R4-2412818%20Topic%20summary%20for%20%5B112%5D%5B116%5D%20NR_ENDC_RF_Ph4_part1.docx>

The conclusions and agreements are as follows.

**Topic #3: MPR applicability for FR2**

**Issue 3-1-1: Whether new CA MPR for CABW < 400MHz should be considered in the WI**

**Agreement:**

* Hold on discussions on whether new MPR requirement is defined for CABW < 400MHz unless the WID can be updated accordingly.
* Only MPR applicability needs to be discussed in this WID, and defining new MPR requirement is out of scope.

**Issue 3-1-3: Power classes considered for FR2 MPR enhancement**

**Agreement:**

* All FR2 power classes could be considered for the MPR enhancement

**Issue 3-1-4: sub-FR2 frequency ranges**

**Agreement:**

* MPR reduction applies to both FR2-1 and FR2-2.

**Newly allocated tdocs for approval**

[**R4-2414278**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414278.zip) **WF on power domain enhancement**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Return to.**

[**R4-2412819**](file:///D:\RAN4%23112\Docs\R4-2412819.zip) **Topic summary for [112][117] NR\_ENDC\_RF\_Ph4\_part2**

*Type: other For: Information  
 Source: Moderator(Samsung)*

**Abstract:**

Summary for AI 8.1.1.1

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

Please refer to the following hyperlinks for detailed minutes:

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_112/Inbox/Drafts/%5B112%5D%5B100%5D%20Main%20Session/1.Monday/6.%5B117%5D_Rev%20R4-2412819%20Topic%20summary%20for%20%5B112%5D%5B117%5D%20NR_ENDC_RF_Ph4_part.docx>

The conclusions and agreements are as follows.

**Topic #1: High power UE (HPUE) for CA in terrestrial network (TN)**

**Issue 1.2.1-1: MPR evaluation methodology and assumption**

**Agreement:**

* MPR and CANS\_04 A-MPR studies for PC1.5 contiguous intra-band ULCA focusses on TxD architecture and may account for PSD imbalance with up to 6dB.
  + FFS on whether to define the requirements based on equal PSD or PSD imbalance with 6dB
* PC1.5 contiguous intra-band ULCA based on dualPA architecture with two LOs is not specified in R19
* MPR studies for PC1.5 non-contiguous intra-band ULCA focusses on dualPA architecture with two LOs and may account for PSD imbalance with up to 6dB.
  + FFS on whether to define the requirements based on equal PSD or PSD imbalance with 6dB
* PC1.5 non-contiguous intra-band ULCA based on TxD architecture is not specified in R19

**Issue 1.2.1-3: PCMAX**

**Agreement:**

* Pcmax is 29dBm for 2Tx TxD

**Newly allocated tdocs for approval**

[**R4-2414277**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414277.zip) **WF on HPUE for CA in TN**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Return to.**

[**R4-2412820**](file:///D:\RAN4%23112\Docs\R4-2412820.zip) **Topic summary for [112][118] NR\_ENDC\_RF\_Ph4\_part3**

*Type: other For: Information  
 Source: Moderator(AT&T)*

**Abstract:**

Summary for AI 8.1.1.3

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

Please refer to the following hyperlinks for detailed minutes:

The conclusions and agreements are as follows.

**Newly allocated tdocs for approval**

### 8.2 Study on IMT parameters for 4400 to 4800 MHz, 7125 to 8400 MHz and 14800 to 15350 MHz

#### 8.2.1 General aspects

**TR**

[**R4-2412608**](file:///D:\RAN4%23112\Docs\R4-2412608.zip) **TR 38.922 version 0.2.0**

*Type: draft TR For: Agreement  
 38.922 v0.2.0 CR- rev Cat: (Rel-19)  
  
 Source: Ericsson*

**Abstract:**

Reserved for TR update based on the meeting. MCC: This is assumed to be for post-meeting agreement. [Post-Meeting]

**Decision:** The document was **for email approval**.

**Discussions**

[**R4-2411307**](file:///D:\RAN4%23112\Docs\R4-2411307.zip) **Discussion on Frequency allocation in Korea**

*Type: discussion For: Discussion  
 Source: Korea Testing Laboratory*

**Decision: Noted.**

[**R4-2411520**](file:///D:\RAN4%23112\Docs\R4-2411520.zip) **Views on Additional AAS aspects**

*Type: discussion For: Discussion  
 Source: Qualcomm Germany*

**Decision: Noted.**

[**R4-2411874**](file:///D:\RAN4%23112\Docs\R4-2411874.zip) **On general aspects related to IMT parameter SI**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

In this contribution we provide an overview of the SI progress and other aspects to consider related to the workplan.

**Decision: Noted.**

#### 8.2.2 LS reply for NR in 4400 to 4800 MHz

**TP**

[**R4-2412587**](file:///D:\RAN4%23112\Docs\R4-2412587.zip) **TP to TR 38.922: Corrections and clarifications on IMT parameters for 4400 to 4800 MHz frequency range**

*Type: pCR For: Approval  
 38.922 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia*

**Abstract:**

This contribution provides a text proposal for corrections and clarifications on IMT parameters for 4400 to 4800 MHz frequency range.

**Decision:** The document was **not treated**.

[**R4-2413278**](file:///D:\RAN4%23112\Docs\R4-2413278.zip) **TP for IMT technology related parameters for 4400 to 4800 MHz**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

#### 8.2.3 Study the IMT parameters relevant for sharing and compatibility for 7125 to 8400 MHz frequency range

[**R4-2411090**](file:///D:\RAN4%23112\Docs\R4-2411090.zip) **Further discussion on IMT parameters for NR in 7125 to 8400MHz**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411193**](file:///D:\RAN4%23112\Docs\R4-2411193.zip) **IMT parameters relevant for sharing and compatibility for 7125 to 8400 MHz frequency range**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses parameters for the 7125-8400 MHz frequency range, addressing ITU-R WP5D LS

**Decision: Noted.**

[**R4-2411518**](file:///D:\RAN4%23112\Docs\R4-2411518.zip) **Views on IMT parameters for 7125 - 8400 MHz**

*Type: discussion For: Discussion  
 Source: Qualcomm Germany*

**Decision: Noted.**

[**R4-2412068**](file:///D:\RAN4%23112\Docs\R4-2412068.zip) **Discussion on the UE parameter for 7125 to 8400 MHz**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412137**](file:///D:\RAN4%23112\Docs\R4-2412137.zip) **Views on IMT parameters for 7125 to 8400 MHz frequency range**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2412565**](file:///D:\RAN4%23112\Docs\R4-2412565.zip) **Discussion on IMT UE parameters for 7125 to 8400 MHz**

*Type: discussion For: Discussion  
 Source: MediaTek (Wuhan) Inc.*

**Decision: Noted.**

[**R4-2412588**](file:///D:\RAN4%23112\Docs\R4-2412588.zip) **BS parameters for 7125 to 8400 MHz frequency range**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

This contribution provides further proposals on the BS antenna parameters in 7125 to 8400 MHz based on the discussion at TSG RAN4#110b

**Decision: Noted.**

[**R4-2412710**](file:///D:\RAN4%23112\Docs\R4-2412710.zip) **Discussion on IMT parameters for 7125-8400MHz**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412967**](file:///D:\RAN4%23112\Docs\R4-2412967.zip) **Discussion on IMT parameters for 7125 to 8400MHz**

*Type: discussion For: Discussion  
 Source: Google*

**Decision: Noted.**

[**R4-2413279**](file:///D:\RAN4%23112\Docs\R4-2413279.zip) **Remaining issues for IMT parameters for range 7125 to 8400 MHz**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**TP**

[**R4-2411141**](file:///D:\RAN4%23112\Docs\R4-2411141.zip) **TP for 38.922 on UE IMT parameters for 7125-8400MHz**

*Type: pCR For: Approval  
 38.922 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: Apple*

**Abstract:**

MCC: Updated the version of Rel-19 draft TR to current version 0.1.0.

**Decision:** The document was **not treated**.

[**R4-2413280**](file:///D:\RAN4%23112\Docs\R4-2413280.zip) **TP for BS IMT parameters for range 7125 to 8400 MHz**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**LS**

[**R4-2411194**](file:///D:\RAN4%23112\Docs\R4-2411194.zip) **LS Reply on Parameters for 7125 to 8400 MHz of terrestrial component of IMT for sharing and compatibility studies in preparation for WRC-27**

*Type: LS out For: Approval  
 to ITU-R WP 5D, cc RAN  
 Source: Ericsson*

**Abstract:**

This contribution is a LS Reply to ITU-R sharing the IMT parameters for the 7125 to 8400 MHz frequency range.

**Decision:** The document was **not treated**.

#### 8.2.4 Study the IMT parameters relevant for sharing and compatibility for 14800 to 15350 MHz frequency range

[**R4-2411091**](file:///D:\RAN4%23112\Docs\R4-2411091.zip) **Further discussion on IMT parameters for NR in 14.8GHz to 15.35GHz**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**TP**

[**R4-2411092**](file:///D:\RAN4%23112\Docs\R4-2411092.zip) **TP to TR 38.922 for 15GHz BS RF parameters**

*Type: other For: Approval  
 Source: CATT*

**Decision:** The document was **not treated**.

##### 8.2.4.1 Co-existence assumptions/simulation

[**R4-2411522**](file:///D:\RAN4%23112\Docs\R4-2411522.zip) **Views on co-existence parameters for 14800 - 15350 MHz**

*Type: discussion For: Discussion  
 Source: Qualcomm Germany*

**Decision: Noted.**

[**R4-2411720**](file:///D:\RAN4%23112\Docs\R4-2411720.zip) **Discussion on ACLR Calculation Procedure for 14800 - 15350 MHz with Beamforming and MIMO**

*Type: discussion For: Discussion  
 Source: ISSDU*

**Abstract:**

This contribution proposes simulation assumptions to perform the ACLR Calculation Procedure for the 14800 - 15350 MHz frequency range.

**Decision: Noted.**

[**R4-2411775**](file:///D:\RAN4%23112\Docs\R4-2411775.zip) **Coexistence study for 14800 to 15350 MHz**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

[**R4-2412069**](file:///D:\RAN4%23112\Docs\R4-2412069.zip) **Discussion on the coexistence for 14800 to 15350 MHz**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412126**](file:///D:\RAN4%23112\Docs\R4-2412126.zip) **On Co-existence simulation assumptions for 14800 to 15350 MHz frequency range**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution triggers discussion on open issues related to co-existence simulation assumptions.

**Decision: Noted.**

[**R4-2412127**](file:///D:\RAN4%23112\Docs\R4-2412127.zip) **On Urban Macro and Indoor Co-existence simulation results for 14800 to 15350 MHz frequency range**

*Type: other For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution provides the simulation results for Urban Macro and Indoor scenario as per the latest agreements.

**Decision: Noted.**

[**R4-2412138**](file:///D:\RAN4%23112\Docs\R4-2412138.zip) **Initial simulation results of co-existence scenarios for 14800 – 15350 MHz**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2412589**](file:///D:\RAN4%23112\Docs\R4-2412589.zip) **Urban macro coexistence simulation results for 14800 to 15350 MHz frequency range**

*Type: discussion For: Discussion  
 Source: Nokia*

**Abstract:**

This contribution provides the urban macro coexistence simulation results for 14800 to 15350 MHz frequency range according to the agreed assumptions.

**Decision: Noted.**

[**R4-2412711**](file:///D:\RAN4%23112\Docs\R4-2412711.zip) **Discussion on co-existence evaluation for 14800 to 15350 MHz**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

**TP**

[**R4-2412590**](file:///D:\RAN4%23112\Docs\R4-2412590.zip) **TP to TR 38.922: Revisions of system level simulation assumptions for study on IMT parameters for 14800 to 15350 MHz frequency range**

*Type: pCR For: Approval  
 38.922 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: Nokia, Fujitsu*

**Abstract:**

This contribution proposes revisions to the agreed assumptions in TR 39.822 [8] based on the simulation results and proposals .

**Decision:** The document was **not treated**.

##### 8.2.4.2 Radio and antenna parameters

[**R4-2411142**](file:///D:\RAN4%23112\Docs\R4-2411142.zip) **On UE antenna parameters for 14800-15350MHz**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411521**](file:///D:\RAN4%23112\Docs\R4-2411521.zip) **Views on Radio parameters for 14800 - 15350 MHz**

*Type: discussion For: Discussion  
 Source: Qualcomm Germany*

**Decision: Noted.**

[**R4-2411776**](file:///D:\RAN4%23112\Docs\R4-2411776.zip) **Coverage study for 14800 to 15350 MHz**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

[**R4-2412070**](file:///D:\RAN4%23112\Docs\R4-2412070.zip) **Discussion on the UE parameter for 14800 to 15350 MHz**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412128**](file:///D:\RAN4%23112\Docs\R4-2412128.zip) **On Antenna feasibility and RF parameters for 14800 to 15350 MHz frequency range**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution provides further discussion points on the feasibility of BS – UE antenna model and IMT parameters relevant for 14800 to 15350 MHz frequency range.

**Decision: Noted.**

[**R4-2412139**](file:///D:\RAN4%23112\Docs\R4-2412139.zip) **Views on UE type for 14800 to 15350 MHz frequency range**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2412591**](file:///D:\RAN4%23112\Docs\R4-2412591.zip) **BS antenna and simulation parameters for 14800 to 15350 MHz frequency range**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

This contribution further discusses the BS antenna and simulation parameters based on the agreed WF and the simulation results.

**Decision: Noted.**

[**R4-2412712**](file:///D:\RAN4%23112\Docs\R4-2412712.zip) **Discussion on radio and antenna parameters for 14800 to 15350 MHz**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

**TP**

[**R4-2411143**](file:///D:\RAN4%23112\Docs\R4-2411143.zip) **TP on UE antenna parameters for 14800-15350MHz**

*Type: pCR For: Approval  
 38.922 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: Apple*

**Abstract:**

MCC: Updated the version of Rel-19 draft TR to the current version 0.1.0.

**Decision:** The document was **not treated**.

#### 8.2.5 Other aspects

[**R4-2411873**](file:///D:\RAN4%23112\Docs\R4-2411873.zip) **On the topic of additional information requested by ITU-R WP 5D**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In addition to parameter assumptions ITU-R WP 5D have also requested information related to some additional topics. In this contribution we will provide information related to modelling of antenna gain outside the wanted carrier and simulation results con

**Decision: Noted.**

[**R4-2411948**](file:///D:\RAN4%23112\Docs\R4-2411948.zip) **IMT parameters: General system and UE aspects**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412592**](file:///D:\RAN4%23112\Docs\R4-2412592.zip) **Study of AAS performance in adjacent bands**

*Type: discussion For: Discussion  
 Source: Nokia*

**Abstract:**

This contribution provides the urban macro coexistence simulation results for 14800 to 15350 MHz frequency range according to the agreed assumptions to study the AAS performance in adjacent bands.

**Decision: Noted.**

[**R4-2412593**](file:///D:\RAN4%23112\Docs\R4-2412593.zip) **Impact of beamforming schemes on the coexistence of IMT with other services**

*Type: discussion For: Discussion  
 Source: Nokia*

**Abstract:**

This study presents simulation results comparing the levels of interference measured at different spatial points (reflecting possible locations of victim terminals) with respect to the (aggressor) BSs due to different BS digital beamforming techniques.

**Decision:** The document was **revised to** [**R4-2413368**](file:///D:\RAN4%23112\Docs\R4-2413368.zip).

[**R4-2413368**](file:///D:\RAN4%23112\Docs\R4-2413368.zip) **Impact of beamforming schemes on the coexistence of IMT with other services**

*Type: discussion For: Discussion  
 Source: Nokia*

(Replaces [R4-2412593](file:///D:\RAN4%23112\Docs\R4-2412593.zip))

**Abstract:**

This study presents simulation results comparing the levels of interference measured at different spatial points (reflecting possible locations of victim terminals) with respect to the (aggressor) BSs due to different BS digital beamforming techniques.

**Decision: Noted.**

[**R4-2412713**](file:///D:\RAN4%23112\Docs\R4-2412713.zip) **Discussion on other issues in ITU-R LS**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2413281**](file:///D:\RAN4%23112\Docs\R4-2413281.zip) **AAS modelling considerations for IMT base stations**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**TP**

[**R4-2411093**](file:///D:\RAN4%23112\Docs\R4-2411093.zip) **TP for other issues (Adjacent channel modelling)**

*Type: other For: Approval  
 Source: CATT*

**Decision:** The document was **not treated**.

[**R4-2411519**](file:///D:\RAN4%23112\Docs\R4-2411519.zip) **Text proposal on 7125 – 8400 MHz IMT parameters in TR 38.922**

*Type: pCR For: Approval  
 38.922 v0.1.0 CR- rev Cat: (Rel-19)  
  
 Source: Qualcomm Germany*

**Abstract:**

MCC: Updated the Rel-19 draft TR version to current version 0.1.0.

**Decision:** The document was **not treated**.

[**R4-2411021**](file:///D:\RAN4%23112\Docs\R4-2411021.zip) **Text Proposals on MIMO models and PA nonlinearity impacts and ACLR**

*Type: other For: Approval  
 Source: Spark NZ Ltd*

**Abstract:**

This contribution provides text proposals for calculating beamforming weights, and modelling of PA non linearities needed to characterize adjacent channel impacts

**Decision:** The document was **not treated**.

#### 8.2.6 Moderator summary and conclusions

[**R4-2412821**](file:///D:\RAN4%23112\Docs\R4-2412821.zip) **Topic summary for [112][119] FS\_NR\_IMT\_part1**

*Type: other For: Information  
 Source: Moderator(Ericsson)*

**Abstract:**

Summary for AI 8.2.1, 8.2.2, 8.2.3

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412822**](file:///D:\RAN4%23112\Docs\R4-2412822.zip) **Topic summary for [112][120] FS\_NR\_IMT\_part2**

*Type: other For: Information  
 Source: Moderator(Nokia)*

**Abstract:**

Summary for AI 8.2.4, 8.2.5

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.3 NR sidelink Intra-band Carrier Aggregation in ITS band

#### 8.3.1 General aspects

**TP**

[**R4-2411650**](file:///D:\RAN4%23112\Docs\R4-2411650.zip) **TP on TR38.787 Updated Reference and Objectives for SL Intra-band CA in ITS spectrum**

*Type: pCR For: Approval  
 38.787 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Meta Ireland*

**Abstract:**

This contribution is a text proposal to update the scope, reference and Rel-19 SL WI objectives in TR38.787 in Rel-19. MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

Chair: do we need a Tdoc for TR for email approval?

#### 8.3.2 UE RF requirements for intra-band non-contiguous CA

##### 8.3.2.1 System parameters

[**R4-2412014**](file:///D:\RAN4%23112\Docs\R4-2412014.zip) **NR side link requirements and European regulation for band n47**

*Type: discussion For: Discussion  
 Source: LG Electronics Finland*

**Abstract:**

Since the NR side link requirements were defined for Rel-17 the regulation in Europe for band n47 has been updated. This contribution discussed these updates and the impacts to NR side link minimum performance requirements.

**Decision: Noted.**

**TP**

[**R4-2411651**](file:///D:\RAN4%23112\Docs\R4-2411651.zip) **TP on TR38.787: Operating bands and UE RF requirements for intra-band non-contiguous SL CA UE**

*Type: pCR For: Approval  
 38.787 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Meta Ireland*

**Abstract:**

This contribution is a text proposal to add the operating bands and UE RF requirements for intra-band non-contiguous SL CA UE in TR38.787. MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

[**R4-2412737**](file:///D:\RAN4%23112\Docs\R4-2412737.zip) **TP on TR38.787 on system parameter for intra-band non-contiguous SL CA**

*Type: pCR For: Approval  
 38.787 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: OPPO*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

##### 8.3.2.2 Tx requirements (incl. MPR/A-MPR)

[**R4-2412017**](file:///D:\RAN4%23112\Docs\R4-2412017.zip) **Tx requirements for SL intra-band non-contiguous CA**

*Type: discussion For: Discussion  
 Source: LG Electronics Finland*

**Abstract:**

In this paper, we provide our views on UE RF requirements for intra-band non-contiguous SL CA for the Band n47 based on the approved WF.

**Decision: Noted.**

[**R4-2412733**](file:///D:\RAN4%23112\Docs\R4-2412733.zip) **SL Intra-band non-contiguous CA simulation results**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**TP**

[**R4-2412739**](file:///D:\RAN4%23112\Docs\R4-2412739.zip) **TP on TR38.787 to capture the intra-band non-contiguous SL CA simulation result**

*Type: pCR For: Approval  
 38.787 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: OPPO*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

##### 8.3.2.3 Rx requirements

[**R4-2412732**](file:///D:\RAN4%23112\Docs\R4-2412732.zip) **SL Intra-band non-contiguous CA RX requirements**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**TP**

[**R4-2412735**](file:///D:\RAN4%23112\Docs\R4-2412735.zip) **TP on TR38.787 on RX requirement for intra-band non-contiguous SL CA**

*Type: pCR For: Approval  
 38.787 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: OPPO*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

#### 8.3.3 UE RF requirements for intra-band contiguous CA

##### 8.3.3.1 System parameters

**TP**

[**R4-2411652**](file:///D:\RAN4%23112\Docs\R4-2411652.zip) **TP on TR38.787: Operating bands and UE RF requirements for intra-band contiguous SL CA UE**

*Type: pCR For: Approval  
 38.787 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: Meta Ireland*

**Abstract:**

This contribution is a text proposal to add the operating bands and UE RF requirements for intra-band contiguous SL CA UE in TR38.787. MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

[**R4-2412736**](file:///D:\RAN4%23112\Docs\R4-2412736.zip) **TP on TR38.787 on system parameter for intra-band contiguous SL CA**

*Type: pCR For: Approval  
 38.787 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: OPPO*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

##### 8.3.3.2 Tx requirements (incl. MPR/A-MPR)

[**R4-2411871**](file:///D:\RAN4%23112\Docs\R4-2411871.zip) **Tx requirements for intra-band contiguous CA**

*Type: discussion For: Discussion  
 Source: LG Electronics*

**Abstract:**

It disscuses UE RF requirements (MPR) for SL intra-band contiguous CA.

**Decision: Noted.**

[**R4-2412731**](file:///D:\RAN4%23112\Docs\R4-2412731.zip) **SL Intra-band contiguous CA simulation results**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**TP**

[**R4-2412738**](file:///D:\RAN4%23112\Docs\R4-2412738.zip) **TP on TR38.787 to capture the intra-band contiguous SL CA simulation result**

*Type: pCR For: Approval  
 38.787 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: OPPO*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

##### 8.3.3.3 Rx requirements

**TP**

[**R4-2412734**](file:///D:\RAN4%23112\Docs\R4-2412734.zip) **TP on TR38.787 on RX requirement for intra-band contiguous SL CA**

*Type: pCR For: Approval  
 38.787 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: OPPO*

**Abstract:**

MCC: The current version of the Rel-19 draft TR is v0.0.0.

**Decision:** The document was **not treated**.

#### 8.3.4 Moderator summary and conclusions

[**R4-2412823**](file:///D:\RAN4%23112\Docs\R4-2412823.zip) **Topic summary for [112][121] NR\_SL\_ intraB\_CA\_ITS\_part1**

*Type: other For: Information  
 Source: Moderator(OPPO)*

**Abstract:**

Summary for AI 8.3, 8.3.1, 8.3.2

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412824**](file:///D:\RAN4%23112\Docs\R4-2412824.zip) **Topic summary for [112][122] NR\_SL\_ intraB\_CA\_ITS\_part2**

*Type: other For: Information  
 Source: Moderator(LGE)*

**Abstract:**

Summary for AI 8.3.3

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.4 NR channel BW less than 5MHz for FR1 Phase 2

#### 8.4.1 General aspects

[**R4-2412272**](file:///D:\RAN4%23112\Docs\R4-2412272.zip) **CA/DC using PC1 in bands n100 and n101**

*Type: discussion For: Discussion  
 Source: Union Inter. Chemins de Fer*

**Abstract:**

This contribution provides a motivation to enable the simultaneous use of PC1 in bands n100 and n101 for NR CA/DC and requests discussion in RAN4 how to proceed.

**Decision: Noted.**

#### 8.4.2 UE RF requirements for inter-band NR CA/DC with 3MHz CBW

[**R4-2411096**](file:///D:\RAN4%23112\Docs\R4-2411096.zip) **Further discussion on UE RF requirements for Rel-19 NR channel BW less than 5MHz for FR1 Phase 2**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411854**](file:///D:\RAN4%23112\Docs\R4-2411854.zip) **Discussion on UE RF requirements for inter-band NR CADC with 3MHz CBW**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412411**](file:///D:\RAN4%23112\Docs\R4-2412411.zip) **Remaining open issues for NR CA\_DC with 3MHz CBW**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412413**](file:///D:\RAN4%23112\Docs\R4-2412413.zip) **Discussion on the remaining issues for Rel-19 less than 5MHz work item for TN phase 2**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

[**R4-2412594**](file:///D:\RAN4%23112\Docs\R4-2412594.zip) **UE RF requirements for inter-band NR CA/DC with 3MHz CBW**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

This contribution provides proposals to progress the issues that were FFS in the agreed WF.

**Decision: Noted.**

[**R4-2413148**](file:///D:\RAN4%23112\Docs\R4-2413148.zip) **Scell bandwidth and sync raster**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**Draft CR**

[**R4-2411097**](file:///D:\RAN4%23112\Docs\R4-2411097.zip) **draftCR on CA configuration for less than 5MHz UE RF requirements in Rel-19**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: CATT*

**Decision:** The document was **not treated**.

[**R4-2412414**](file:///D:\RAN4%23112\Docs\R4-2412414.zip) **Big draftCR for less than 5MHz UE RF requirements in Rel-19**

*Type: draftCR For: Endorsement  
 38.133 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Intel Corporation*

**Decision:** The document was **not treated**.

**LS out**

[**R4-2412429**](file:///D:\RAN4%23112\Docs\R4-2412429.zip) **LS on inclusion of 3MHz CBW in inter band NR CA\_DC applications**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

#### 8.4.3 RRM core requirements

#### 8.4.4 Moderator summary and conclusions

[**R4-2412825**](file:///D:\RAN4%23112\Docs\R4-2412825.zip) **Topic summary for [112][123] NR\_FR1\_5MHz\_BW\_Ph2**

*Type: other For: Information  
 Source: Moderator(Intel)*

**Abstract:**

Summary for AI 5.11.1, 8.4, 8.4.1, 8.4.2

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.5 Support of intra-band non-collocated EN-DC/NR-CA deployment Phase2: new receiver type(s)

#### 8.5.1 General aspects

**WID revision**

[**R4-2411288**](file:///D:\RAN4%23112\Docs\R4-2411288.zip) **R19 Revised WID\_Intra-band non-collocated EN-DC and NR-CA**

*Type: WID revised For: Endorsement  
 Source: KDDI Corporation*

**Decision:** The document was **not treated**.

**LS out**

[**R4-2411419**](file:///D:\RAN4%23112\Docs\R4-2411419.zip) **LS on freqeuncy separation for type 4 UE**

*Type: LS out For: Approval  
 to RAN5  
 Source: Apple*

**Decision:** The document was **not treated**.

#### 8.5.2 UE RF requirements

[**R4-2412612**](file:///D:\RAN4%23112\Docs\R4-2412612.zip) **Non-collocated Intra-band NR CA/EN-DC UE requirements**

*Type: other For: Approval  
 Source: Qualcomm France*

**Abstract:**

Considerations on open aspects for Non-collocated NR CA/EN-DC UE are provided in this contribution.

**Decision: Noted.**

##### 8.5.2.1 UE RF requirements for Type 4a/4b capable FWA UE for EN-DC/NR-CA

[**R4-2411414**](file:///D:\RAN4%23112\Docs\R4-2411414.zip) **On RF requirement for type 4 UE**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411892**](file:///D:\RAN4%23112\Docs\R4-2411892.zip) **Discussion on UE RF for type 4a and type 4b for NonCol\_intraB\_ENDC\_NR\_CA**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412431**](file:///D:\RAN4%23112\Docs\R4-2412431.zip) **Remaining open RF discussions for type 4 UEs**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412512**](file:///D:\RAN4%23112\Docs\R4-2412512.zip) **Minimum DL frequency separation for Rel-19 non-collocated**

*Type: other For: Approval  
 Source: NTT DOCOMO INC.*

**Decision: Noted.**

[**R4-2412730**](file:///D:\RAN4%23112\Docs\R4-2412730.zip) **on intra-band non-collocated UE RF requirement**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2412847**](file:///D:\RAN4%23112\Docs\R4-2412847.zip) **UE RF requirements for type 4a/4b capable FWA UE for EN-DC/NR-CA**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Observations and proposals based on approved WF from RAN4#111.

**Decision: Noted.**

**Draft CR**

[**R4-2411417**](file:///D:\RAN4%23112\Docs\R4-2411417.zip) **Draft CR on RF requirement update for type 4 UE**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Apple*

**Abstract:**

MCC: This was not made available at tdoc submission deadline. This is a Rel-19 draftCR.

**Decision:** The document was **not treated**.

[**R4-2411418**](file:///D:\RAN4%23112\Docs\R4-2411418.zip) **Draft CR on RF requirement update for type 4 UE**

*Type: draftCR For: Endorsement  
 38.101-3 v18.6.0 CR- rev Cat: B (Rel-19)  
  
 Source: Apple*

**Abstract:**

MCC: This was not made available at tdoc submission deadline. This is a Rel-19 draftCR.

**Decision:** The document was **not treated**.

##### 8.5.2.2 UE Capability/UE behavior and network signaling for Type 4 EN-DC/NR-CA

[**R4-2411290**](file:///D:\RAN4%23112\Docs\R4-2411290.zip) **Discussion on UE Capability and BS Signaling for non-collocated Type 4a4b**

*Type: discussion For: Discussion  
 Source: KDDI Corporation*

**Decision: Noted.**

[**R4-2411312**](file:///D:\RAN4%23112\Docs\R4-2411312.zip) **Views on non-collocated deployment**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2411415**](file:///D:\RAN4%23112\Docs\R4-2411415.zip) **On type 4 UE capability**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411893**](file:///D:\RAN4%23112\Docs\R4-2411893.zip) **Discussion on UE Capability UE behavior and network signaling for Type 4a Type 4b EN-DCNR-CA**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412013**](file:///D:\RAN4%23112\Docs\R4-2412013.zip) **Discussion intra-band non-collocated deployment Phase2 UE Capability/UE behavior and network signaling**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

[**R4-2412439**](file:///D:\RAN4%23112\Docs\R4-2412439.zip) **Remaining open UE capability discussions for type 4 UEs**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412729**](file:///D:\RAN4%23112\Docs\R4-2412729.zip) **on intra-band non-collocated UE behavior and capability**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2412848**](file:///D:\RAN4%23112\Docs\R4-2412848.zip) **UE behavior and network signaling for type 4a/4b capable FWA UE for EN-DC/NR-CA**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Observations and proposals based on approved WF from RAN4#111.

**Decision: Noted.**

##### 8.5.2.3 Other aspects (incl. clarification of contiguous LTE CCs)

[**R4-2411289**](file:///D:\RAN4%23112\Docs\R4-2411289.zip) **Discussion on the number of CCs for non-collocated EN-DC,NR-CA Type 4a4b**

*Type: discussion For: Discussion  
 Source: KDDI, LG Uplus, NTT DOCOMO INC., SoftBank*

**Decision: Noted.**

[**R4-2411416**](file:///D:\RAN4%23112\Docs\R4-2411416.zip) **On number of LTE carriers for intra-band non-collocated EN-DC**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2412728**](file:///D:\RAN4%23112\Docs\R4-2412728.zip) **on intra-band non-collocated other aspects**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

#### 8.5.3 RRM core requirements

#### 8.5.4 Moderator summary and conclusions

[**R4-2412826**](file:///D:\RAN4%23112\Docs\R4-2412826.zip) **Topic summary for [112][124] NonCol\_intraB\_ENDC\_NR\_CA**

*Type: other For: Information  
 Source: Moderator(KDDI)*

**Abstract:**

Summary for AI 5.7, 8.5.1, 8.5.2

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.6 Study on NR FR1 DL Fragmented Carriers

#### 8.6.1 General aspects and work plan

**Work plan**

[**R4-2411554**](file:///D:\RAN4%23112\Docs\R4-2411554.zip) **Work plan for fragment carriers study**

*Type: Work Plan For: Approval  
 Source: MediaTek Inc.*

**Decision:** The document was **not treated**.

**TR skeleton**

[**R4-2411553**](file:///D:\RAN4%23112\Docs\R4-2411553.zip) **TR 38.755 skeleton FR1 Fragmented carriers**

*Type: draft TR For: Agreement  
 38.755 v0.0.0 CR- rev Cat: (Rel-19)  
  
 Source: MediaTek Inc.*

**Decision:** The document was **not treated**.

#### 8.6.2 Methods for reducing the number of UE Rx chains

[**R4-2411310**](file:///D:\RAN4%23112\Docs\R4-2411310.zip) **Views on UE RF architecture and NW deployment assumption for fragmented carriers**

*Type: discussion For: Discussion  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Noted.**

[**R4-2411404**](file:///D:\RAN4%23112\Docs\R4-2411404.zip) **On methods for reducing the number of UE Rx chains for fragmented carriers**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411555**](file:///D:\RAN4%23112\Docs\R4-2411555.zip) **Discussion on methods for reducing the number of UE Rx chains**

*Type: discussion For: Discussion  
 38.755 v CR- rev Cat: ()  
  
 Source: MediaTek Inc.*

**Decision: Noted.**

[**R4-2411691**](file:///D:\RAN4%23112\Docs\R4-2411691.zip) **On general aspects of fragmented carriers**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412087**](file:///D:\RAN4%23112\Docs\R4-2412087.zip) **Discussion on methods for reducing the number of UE RX chains**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412274**](file:///D:\RAN4%23112\Docs\R4-2412274.zip) **Discussion on methods for reducing the number of UE RX chains**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2412278**](file:///D:\RAN4%23112\Docs\R4-2412278.zip) **Operator’s initial views on FR1 fragmented carriers study**

*Type: discussion For: Discussion  
 Source: CHTTL*

**Decision: Noted.**

[**R4-2413031**](file:///D:\RAN4%23112\Docs\R4-2413031.zip) **On architecture options for fragmented spectrum reception**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

An R-19 SID aim at enhancing UE receiver capability to receive fragmented spectrum within one band. In this contribution, we explore possible architecture enhancements and their limitations.

**Decision: Noted.**

[**R4-2413270**](file:///D:\RAN4%23112\Docs\R4-2413270.zip) **Discussion on UE Rx chains of Fragmented Carriers**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

The paper will discuss some issues of the number of UE Rx chains of fragmented carriers.

**Decision: Noted.**

[**R4-2413339**](file:///D:\RAN4%23112\Docs\R4-2413339.zip) **Discussion on methods for reducing the number of UE Rx chains for Fragmented Carriers**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

#### 8.6.3 Impacts on UE RF requirements and DL performance

[**R4-2411114**](file:///D:\RAN4%23112\Docs\R4-2411114.zip) **Discussion on impacts on UE RF requirements and DL performance for fragmented carriers**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411311**](file:///D:\RAN4%23112\Docs\R4-2411311.zip) **Views on UE RF requirements for fragmented carriers**

*Type: discussion For: Discussion  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Noted.**

[**R4-2411405**](file:///D:\RAN4%23112\Docs\R4-2411405.zip) **On UE RF requirements for fragmented carriers**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411556**](file:///D:\RAN4%23112\Docs\R4-2411556.zip) **Discussion on UE RF requirements and DL performance impacts**

*Type: discussion For: Discussion  
 38.755 v CR- rev Cat: ()  
  
 Source: MediaTek Inc.*

**Decision: Noted.**

[**R4-2411692**](file:///D:\RAN4%23112\Docs\R4-2411692.zip) **On RF requirements of fragmented carriers**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2411886**](file:///D:\RAN4%23112\Docs\R4-2411886.zip) **View on Fragmented carrier**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412088**](file:///D:\RAN4%23112\Docs\R4-2412088.zip) **Discussion on impacts on UE RF requirements and DL performance**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2413271**](file:///D:\RAN4%23112\Docs\R4-2413271.zip) **Discusson on impact on UE RF requirement of fragmented carriers**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

The paper will discuss the impact on UE RF requirements of fragmented carriers.

**Decision: Noted.**

[**R4-2413340**](file:///D:\RAN4%23112\Docs\R4-2413340.zip) **Discussion on impacts on UE RF requirements and DL performance for Fragmented Carriers**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

#### 8.6.4 Moderator summary and conclusions

[**R4-2412827**](file:///D:\RAN4%23112\Docs\R4-2412827.zip) **Topic summary for [112][125] FS\_NR\_DL\_Frag\_Carrier**

*Type: other For: Information  
 Source: Moderator(Mediatek)*

**Abstract:**

Summary for AI 8.6

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.7 NR power class 2 RedCap (Reduced Capability) UE in FR1

#### 8.7.1 General aspects and work plan

**Work plan**

[**R4-2412465**](file:///D:\RAN4%23112\Docs\R4-2412465.zip) **Work plan on power class 2 RedCap in FR1**

*Type: Work Plan For: Approval  
 Source: China Telecom*

**Abstract:**

MCC: The type was revised to work plan.

**Decision:** The document was **not treated**.

#### 8.7.2 UE RF requirements

[**R4-2411115**](file:///D:\RAN4%23112\Docs\R4-2411115.zip) **On UE RF requirements for PC2 RedCap**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411171**](file:///D:\RAN4%23112\Docs\R4-2411171.zip) **On PC2 RedCap UE in FR1**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2411242**](file:///D:\RAN4%23112\Docs\R4-2411242.zip) **Enabling PC2 RedCap UEs in TDD and FDD bands**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution we discuss which requirements are relevant for both TDD, HD-FDD and FD-FDD 1Tx PC2 RedCap UEs.

**Decision: Noted.**

[**R4-2411744**](file:///D:\RAN4%23112\Docs\R4-2411744.zip) **PC2 requirements for TDD RedCap and eRedCap**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2412466**](file:///D:\RAN4%23112\Docs\R4-2412466.zip) **Discussion on PC2 RedCap for TDD bands**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

[**R4-2412957**](file:///D:\RAN4%23112\Docs\R4-2412957.zip) **Discussion on the RF impacts for Rel-19 PC2 TDD RedCap UE**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412984**](file:///D:\RAN4%23112\Docs\R4-2412984.zip) **PC2 RedCap RF overview**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our view on PC2 RedCap UE RF.

**Decision: Noted.**

**Draft CR**

[**R4-2412467**](file:///D:\RAN4%23112\Docs\R4-2412467.zip) **draft CR on power class 2 RedCap for TDD bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: (Rel-18)  
  
 Source: China Telecom, ZTE*

**Decision:** The document was **not treated**.

#### 8.7.3 Moderator summary and conclusions

[**R4-2412828**](file:///D:\RAN4%23112\Docs\R4-2412828.zip) **Topic summary for [112][126] NR\_PC2\_RedCap\_UE**

*Type: other For: Information  
 Source: Moderator(China Telecom)*

**Abstract:**

Summary for AI 8.7

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.8 Enhanced requirements and conductive test methodology for NR NTN and IoT NTN

[**R4-2411467**](file:///D:\RAN4%23112\Docs\R4-2411467.zip) **Discussion on Enhanced RRM requirements and conductive test methodology for NTN**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Abstract:**

MCC: The moderator stated that this is under topic thread [127] agenda 8.8. In this tdoc, it carries two proposals: Proposal 1 is to discuss the less than 5MHz RRM topics, which the moderator believes it should be handled in topic thread [216] agenda 8.8.

**Decision:** The document was **not treated**.

#### 8.8.1 General aspects and work plan

**Work plan**

[**R4-2412554**](file:///D:\RAN4%23112\Docs\R4-2412554.zip) **Workplan for enhanced requirements and conductive test methodology for NR-NTN and IoT-NTN**

*Type: Work Plan For: Approval  
 Source: Samsung, Xiaomi*

**Abstract:**

work plan for HPUE, less than 5MHz and NGSO testing

**Decision: Approved.**

#### 8.8.2 UE RF requirements for NTN HPUE

[**R4-2411505**](file:///D:\RAN4%23112\Docs\R4-2411505.zip) **Discussion on RF requirements in NR\_IoT\_NTN\_req\_test\_enh WI for NTN HPUE**

*Type: discussion For: Discussion  
 Source: Mediatek India Technology Pvt.*

**Decision: Noted.**

**Withdrawn**

[**R4-2411549**](file:///D:\RAN4%23112\Docs\R4-2411549.zip) **Initial views on HPUE for NTN in bands n253, n255 and n256**

*Type: discussion For: Discussion  
 Source: Inmarsat, Viasat*

**Abstract:**

MCC: This was not made available at tdoc submission deadline.

**Decision: Withdrawn.**

##### 8.8.2.1 Coexistence study for example bands

[**R4-2411066**](file:///D:\RAN4%23112\Docs\R4-2411066.zip) **Discussion on coexistence study for NTN support HPUE**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411602**](file:///D:\RAN4%23112\Docs\R4-2411602.zip) **Discussion on co-existence of NTN HPUE**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411771**](file:///D:\RAN4%23112\Docs\R4-2411771.zip) **coexistence study of NTN HPUE**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2412071**](file:///D:\RAN4%23112\Docs\R4-2412071.zip) **Discussion on the co-existence simulation assumptions for NTN HPUE**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412125**](file:///D:\RAN4%23112\Docs\R4-2412125.zip) **On Co-existence considerations for NR and IoT NTN related to High Power UE (HPUE) for NTN**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution intends to trigger the discussion on co-existence studies assumptions for evaluation of ACLR and ACS corresponding to the specified power classes.

**Decision: Noted.**

[**R4-2412463**](file:///D:\RAN4%23112\Docs\R4-2412463.zip) **Simulation for NTN co-existence study**

*Type: discussion For: Discussion  
 Source: Mediatek India Technology Pvt.*

**Decision: Noted.**

[**R4-2412555**](file:///D:\RAN4%23112\Docs\R4-2412555.zip) **Discussion on coexistence study scenarios and assumptions**

*Type: discussion For: Discussion  
 Source: Samsung*

**Abstract:**

HPUE coex assumptions

**Decision: Noted.**

[**R4-2412556**](file:///D:\RAN4%23112\Docs\R4-2412556.zip) **Preliminary HPUE NR-NTN and IoT-NTN co-ex results for information**

*Type: discussion For: Discussion  
 Source: Samsung*

**Abstract:**

HPUE coex results

**Decision: Noted.**

[**R4-2412557**](file:///D:\RAN4%23112\Docs\R4-2412557.zip) **Running documents for co-ex assumptions**

*Type: discussion For: Discussion  
 Source: Samsung*

**Abstract:**

HPUE coex assumptions running document

**Decision: Noted.**

[**R4-2412718**](file:///D:\RAN4%23112\Docs\R4-2412718.zip) **Discussion on coexistence study for NTN HPUE**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412838**](file:///D:\RAN4%23112\Docs\R4-2412838.zip) **Discussion on NTN HPUE co-existence study**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

[**R4-2412922**](file:///D:\RAN4%23112\Docs\R4-2412922.zip) **Coexistence study for NTN HPUE**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

[**R4-2412963**](file:///D:\RAN4%23112\Docs\R4-2412963.zip) **General discussion on coexistence study for NR NTN HPUE**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413352**](file:///D:\RAN4%23112\Docs\R4-2413352.zip) **Discussion on FR1-NTN High Power UE (HPUE)**

*Type: discussion For: Discussion  
 Source: THALES, Magister Solutions Ltd*

**Abstract:**

As described in RP-240857 (New WID: Enhanced requirements and test methodology for NR and IoT NTN), until Rel-18, the 3GPP specifications limit maximum non-terrestrial network (NTN) UE transmission (Tx) power to the level of 23dBm, which may not allow to

**Decision: Noted.**

##### 8.8.2.2 Tx requirements

[**R4-2411067**](file:///D:\RAN4%23112\Docs\R4-2411067.zip) **Discussion on UE Tx requirement for NTN support HPUE**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411144**](file:///D:\RAN4%23112\Docs\R4-2411144.zip) **On restricted set of A-MPR simulations for the satellite band UE Tx requirements**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2411145**](file:///D:\RAN4%23112\Docs\R4-2411145.zip) **Initial A-MPR results for PC2 on NTN L-/S-band**

*Type: discussion For: Discussion  
 Source: Apple*

**Abstract:**

Initial A-MPR results for the NTN band n254 with PC2. This meeting, it is only for information.

**Decision: Noted.**

[**R4-2411499**](file:///D:\RAN4%23112\Docs\R4-2411499.zip) **Discussion on NTN HPUE TX RF requirements**

*Type: discussion For: Discussion  
 Source: Mediatek India Technology Pvt.*

**Decision: Noted.**

[**R4-2411540**](file:///D:\RAN4%23112\Docs\R4-2411540.zip) **emission limit for HPUE in IoT NTN**

*Type: discussion For: Discussion  
 Source: Sony*

**Decision: Noted.**

[**R4-2411603**](file:///D:\RAN4%23112\Docs\R4-2411603.zip) **Discussion onTx requirements of NTN HPUE**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411659**](file:///D:\RAN4%23112\Docs\R4-2411659.zip) **Discussion on HPUE TX requirements for NR NTN**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412099**](file:///D:\RAN4%23112\Docs\R4-2412099.zip) **Feasibility study and Initial analysis for NTN HPUE RF Tx Requirements**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2412357**](file:///D:\RAN4%23112\Docs\R4-2412357.zip) **Discussion on Tx requirements for NTN HPUE**

*Type: discussion For: Discussion  
 Source: LG Electronics France*

**Decision: Noted.**

[**R4-2412558**](file:///D:\RAN4%23112\Docs\R4-2412558.zip) **Discussion on NTN HPUE Tx requirements**

*Type: discussion For: Discussion  
 Source: Samsung*

**Abstract:**

NTN HPUE Tx

**Decision: Noted.**

[**R4-2412719**](file:///D:\RAN4%23112\Docs\R4-2412719.zip) **Discussion on Tx requirements for NTN UE**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412726**](file:///D:\RAN4%23112\Docs\R4-2412726.zip) **Initial discussion on HPUE NTN TX requirement**

*Type: discussion For: Discussion  
 Source: OPPO*

**Decision: Noted.**

[**R4-2412839**](file:///D:\RAN4%23112\Docs\R4-2412839.zip) **Discussion on NTN HPUE TX requirements**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

[**R4-2412964**](file:///D:\RAN4%23112\Docs\R4-2412964.zip) **General discussion on Tx requirements for NR NTN HPUE**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413144**](file:///D:\RAN4%23112\Docs\R4-2413144.zip) **Support for NTN high power UE**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

[**R4-2413365**](file:///D:\RAN4%23112\Docs\R4-2413365.zip) **On UE RF Tx requirements for NTN HPUE**

*Type: other For: Approval  
 Source: Ericsson India Private Limited*

**Decision: Noted.**

##### 8.8.2.3 Rx requirements

[**R4-2411500**](file:///D:\RAN4%23112\Docs\R4-2411500.zip) **Discussion on NTN HPUE RX RSD requirements**

*Type: discussion For: Discussion  
 Source: Mediatek India Technology Pvt.*

**Decision: Noted.**

[**R4-2412100**](file:///D:\RAN4%23112\Docs\R4-2412100.zip) **Initial analysis for NTN HPUE RF Rx Requirements**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2412559**](file:///D:\RAN4%23112\Docs\R4-2412559.zip) **Discussion on NTN HPUE Rx requirements**

*Type: discussion For: Discussion  
 Source: Samsung*

**Abstract:**

NTN HPUE Rx

**Decision: Noted.**

[**R4-2412720**](file:///D:\RAN4%23112\Docs\R4-2412720.zip) **Discussion on Rx requirements for NTN UE**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412725**](file:///D:\RAN4%23112\Docs\R4-2412725.zip) **Initial discussion on HPUE NTN RX requirement**

*Type: discussion For: Discussion  
 Source: OPPO*

**Decision: Noted.**

[**R4-2412840**](file:///D:\RAN4%23112\Docs\R4-2412840.zip) **Discussion on NTN HPUE RX requirements**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

[**R4-2412965**](file:///D:\RAN4%23112\Docs\R4-2412965.zip) **General discussion on Rx requirements for NR NTN HPUE**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413366**](file:///D:\RAN4%23112\Docs\R4-2413366.zip) **On UE RF Rx requirements for NTN HPUE**

*Type: other For: Approval  
 Source: Ericsson India Private Limited*

**Decision: Noted.**

#### 8.8.3 Less than 5MHz for NTN

#### 8.8.4 NTN testing for NGSO

#### 8.8.5 Moderator summary and conclusions

[**R4-2412829**](file:///D:\RAN4%23112\Docs\R4-2412829.zip) **Topic summary for [112][127] NR\_IoT\_NTN\_HPUE**

*Type: other For: Information  
 Source: Moderator(Samsung)*

**Abstract:**

Summary for AI 8.8, 8.8.1, 8.8.2

**Decision: Noted.**

**Miniutes and conlcusions in the first round**

Please refer to the following hyperlinks for detailed minutes:

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_112/Inbox/Drafts/%5B112%5D%5B100%5D%20Main%20Session/1.Monday/5.%5B127%5D_R4-2412829%20Topic%20Summary%20for%20%5B112%5D%5B127%5D%20NR_IoT_NTN_HPUE_v02_QC2_Moderator2.docx>

The conclusions and agreements are as follows.

**Topic #2: HPUE co-existence study**

**Issue 2-1: General starting point for co-ex assumptions and scenarios**

**Agreement:**

* Agree to use TR 38.863 and WF R4-2217473 for NR-NTN and IoT-NTN HPUE coex study assumptions and scenarios as starting point.
  + The detailed modifications to these references will be discussed and agreed in case-by-case manner.

**Issue 2-2-1: NTN scenarios for co-ex study**

**Agreement:**

* For the scenario, consider the scenarios in TR 38.863 as a baseline
  + Prioritize GEO and LEO1200 for co-existence evaluation
    - LEO600 is not precluded for the requirements and the conclusion for LEO1200 can be applied to LEO600

**Issue 2-2-3: Co-ex scenario # to be studied**

**Agreement:**

* Consider both Scenario 4 and 5 for co-existence study
  + Prioritize scenario 4 since it is the worst case
* Do not consider Scenario 1, 2, 3 and 6

**Issue 2-3-1 NTN and TN network isolation distance**

**Agreement:**

* Consider isolation distance in scenario 4 and 5 for both NR-NTN HPUE coex and IoT-NTN HPUE coex.
  + Use the isolation distance 1.5km as the starting point
  + Other values for isolation distance are not precluded

**Issue 2-5-2: Handheld and non-handheld type**

**Agreement:**

* To use TR 38.863 UE characteristics as starting point for NTN HPUE co-ex studies.

**Topic #3: HPUE Tx requirements**

**Issue 3-1-2: Consideration of band(s)**

**Agreement:**

* Use 2GHz for the co-existence study
* WI can be completed when the band specific requirements for one pair of {n256,256}and {n255, 255} are completed in this WI
  + Specify the band specific requirements for other potential NTN bands in the separate spectrum WI

**Issue 3-3-4: SAR for handheld**

**Tentative agreement:**

* Using P-MPR as the starting point
* The other solutions are not precluded
  + E.g., the solution similar to TN duty cycle based on UE capability and network scheduling

**Newly allocated tdocs for approval**

[**R4-2414275**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414275.zip) **WF on UE RF requirements for NTN HPUE**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Return to.**

[**R4-2414276**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2414276.zip) **Simulation assumption for co-existence study**

*Type: other For: Information  
 Source: Samsung*

**Decision: Return to.**

### 8.9 Introduction of Ku Band for NR NTN

### 8.10 Enhancements for Air-to-ground network for NR

#### 8.10.1 General aspects

#### 8.10.2 UE RF requirements for CA and UL-MIMO

##### 8.10.2.1 Intra-band contiguous CA

[**R4-2411728**](file:///D:\RAN4%23112\Docs\R4-2411728.zip) **(NR\_ATG\_enh-Core) Discussion on UE RF requirements for ATG with intra-band contiguous CA**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2412701**](file:///D:\RAN4%23112\Docs\R4-2412701.zip) **RF requirement for Intra-band contiguous CA of ATG UE in Rel-19**

*Type: other For: Approval  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412954**](file:///D:\RAN4%23112\Docs\R4-2412954.zip) **Discussion on Rel-19 ATG UE RF with DL intra-band contiguous CA**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413264**](file:///D:\RAN4%23112\Docs\R4-2413264.zip) **Discussion on RF requirement of ATG UE intra-band contiguous CA**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This paper will delve into some RF considerations for defining requirements for ATG CA and UL MIMO

**Decision: Noted.**

##### 8.10.2.2 Inter-band CA

[**R4-2411727**](file:///D:\RAN4%23112\Docs\R4-2411727.zip) **(NR\_ATG\_enh-Core) Discussion on UE RF requirements for ATG with inter-band CA**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2412702**](file:///D:\RAN4%23112\Docs\R4-2412702.zip) **Discussion on RF requirement for Inter-band CA for ATG UE in Rel-19**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412955**](file:///D:\RAN4%23112\Docs\R4-2412955.zip) **Discussion on Rel-19 ATG UE RF with DL inter-band CA\_n3-n39**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413262**](file:///D:\RAN4%23112\Docs\R4-2413262.zip) **Views on Rel-19 ATG UE RF requirements**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

[**R4-2413265**](file:///D:\RAN4%23112\Docs\R4-2413265.zip) **Discussion on RF requirement of ATG UE inter-band CA**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

There remain numerous unresolved matters requiring attention, and this paper will delve into the RF requirement for ATG UE inter-band CA.

**Decision: Noted.**

##### 8.10.2.3 UL-MIMO

[**R4-2411729**](file:///D:\RAN4%23112\Docs\R4-2411729.zip) **(NR\_ATG\_enh-Core) Discussion on UE RF requirements for ATG with UL-MIMO**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411876**](file:///D:\RAN4%23112\Docs\R4-2411876.zip) **ATG UE RF requirements for UL-MIMO**

*Type: discussion For: Discussion  
 Source: LG Electronics*

**Abstract:**

It disscuses ATG UE RF requirements for UL-MIMO.

**Decision: Noted.**

[**R4-2412703**](file:///D:\RAN4%23112\Docs\R4-2412703.zip) **Discussion on RF requirement for UL-MIMO for ATG UE in Rel-19**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412956**](file:///D:\RAN4%23112\Docs\R4-2412956.zip) **Discussion on Rel-19 ATG UE RF with UL MIMO**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413159**](file:///D:\RAN4%23112\Docs\R4-2413159.zip) **Remaining issue on MIMO for ATG UE**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2413266**](file:///D:\RAN4%23112\Docs\R4-2413266.zip) **Discussion on RF requirement of ATG UE UL MIMO**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on RF requirement of ATG UE UL MIMO

**Decision: Noted.**

##### 8.10.2.4 Others

#### 8.10.3 BS RF requirements for CA

#### 8.10.4 RRM core requirements for CA

#### 8.10.5 Moderator summary and conclusions

[**R4-2412830**](file:///D:\RAN4%23112\Docs\R4-2412830.zip) **Topic summary for [112][128] NR\_ATG\_enh**

*Type: other For: Information  
 Source: Moderator(CMCC)*

**Abstract:**

Summary for AI 5.8.1, 8.10.1, 8.10.2

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.11 NR base station (BS) RF requirement evolution for FR1/FR2 and testing

### 8.12 TRP (Total Radiated Power), TRS (Total Radiated Sensitivity) and MIMO OTA (Over the Air) testing enhancement Phase 3

### 8.13 Study on NR FR2 OTA (Over the Air) testing enhancement Phase 3

### 8.14 Study on spatial channel model for demodulation performance requirements

### 8.15 NR Radio Resource Management (RRM) Phase 5

### 8.16 NR demodulation performance Phase 5

### 8.17 Artificial Intelligence (AI)/Machine Learning (ML) for NR Air Interface

#### 8.17.1 General aspects

[**R4-2411258**](file:///D:\RAN4%23112\Docs\R4-2411258.zip) **Discussion on general aspects of AIML for NR air interface**

*Type: discussion For: Discussion  
 Source: CAICT*

**Decision: Noted.**

[**R4-2411340**](file:///D:\RAN4%23112\Docs\R4-2411340.zip) **Discussion on general aspects for AIML for NR air**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411408**](file:///D:\RAN4%23112\Docs\R4-2411408.zip) **General aspects on AI/ML for NR Air Interface**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411625**](file:///D:\RAN4%23112\Docs\R4-2411625.zip) **Discussion on general aspects of AI/ML testability and interoperability**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411980**](file:///D:\RAN4%23112\Docs\R4-2411980.zip) **Discussion on generalization**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2412021**](file:///D:\RAN4%23112\Docs\R4-2412021.zip) **On General Aspects of AI/ML for Air Interface**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412249**](file:///D:\RAN4%23112\Docs\R4-2412249.zip) **Discussion on general aspects for AIML**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412331**](file:///D:\RAN4%23112\Docs\R4-2412331.zip) **Views on general aspects of AI/ML testability and interoperability**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

[**R4-2412765**](file:///D:\RAN4%23112\Docs\R4-2412765.zip) **Discussion on general aspects for AIML**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

[**R4-2413040**](file:///D:\RAN4%23112\Docs\R4-2413040.zip) **Discussion on the AI/ML general aspects**

*Type: discussion For: Discussion  
 Source: ZTECorporation,Sanechips*

**Decision: Noted.**

[**R4-2413391**](file:///D:\RAN4%23112\Docs\R4-2413391.zip) **On general AI/ML aspects**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

On general AI/ML aspects

**Decision: Noted.**

**Draft CR**

[**R4-2412023**](file:///D:\RAN4%23112\Docs\R4-2412023.zip) **Draft CR on Correction in AIML Term Definitions**

*Type: draftCR For: Endorsement  
 38.843 v18.0.0 CR- rev Cat: F (Rel-19)  
  
 Source: Nokia*

**Decision:** The document was **not treated**.

#### 8.17.2 Testability and interoperability issues for beam management

[**R4-2411177**](file:///D:\RAN4%23112\Docs\R4-2411177.zip) **Testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: Korea Testing Laboratory*

**Decision: Noted.**

[**R4-2411254**](file:///D:\RAN4%23112\Docs\R4-2411254.zip) **OTA Test System/Testability Considerations for FR2 AI/ML Beam Management Use Cases**

*Type: other For: Approval  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

[**R4-2411259**](file:///D:\RAN4%23112\Docs\R4-2411259.zip) **Discussion on testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: CAICT*

**Decision: Noted.**

[**R4-2411279**](file:///D:\RAN4%23112\Docs\R4-2411279.zip) **Study on CDL channel model for AI/ML beam management in FR2**

*Type: other For: Approval  
 Source: Anritsu Corporation*

**Abstract:**

In this contribution we share our findings on the conditions to apply the CDL channel model to the beam management verification.

**Decision: Noted.**

[**R4-2411292**](file:///D:\RAN4%23112\Docs\R4-2411292.zip) **Testability and interoperability issues for beam management**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2411341**](file:///D:\RAN4%23112\Docs\R4-2411341.zip) **Discussion on testability and interoperability issues for BM**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411409**](file:///D:\RAN4%23112\Docs\R4-2411409.zip) **Discussion on Testability and Interoperability issues for Beam Management**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411587**](file:///D:\RAN4%23112\Docs\R4-2411587.zip) **Discussion on test setup for AI/ML based beam management**

*Type: discussion For: Discussion  
 Source: Rohde & Schwarz*

**Decision: Noted.**

[**R4-2411626**](file:///D:\RAN4%23112\Docs\R4-2411626.zip) **Discussion on testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411635**](file:///D:\RAN4%23112\Docs\R4-2411635.zip) **Further discussion on testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2411706**](file:///D:\RAN4%23112\Docs\R4-2411706.zip) **Discussion on AI/ML RAN4 BM use case**

*Type: discussion For: Discussion  
 Source: MediaTek Inc.*

**Decision: Noted.**

[**R4-2411978**](file:///D:\RAN4%23112\Docs\R4-2411978.zip) **Discussion on testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2412231**](file:///D:\RAN4%23112\Docs\R4-2412231.zip) **Testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discuss AIML for beam management relevant issuses.

**Decision: Noted.**

[**R4-2412250**](file:///D:\RAN4%23112\Docs\R4-2412250.zip) **Discussion on testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412766**](file:///D:\RAN4%23112\Docs\R4-2412766.zip) **Discussion on testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

[**R4-2412994**](file:///D:\RAN4%23112\Docs\R4-2412994.zip) **Testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

[**R4-2413038**](file:///D:\RAN4%23112\Docs\R4-2413038.zip) **Discussion on the Interoperability and testability aspects of AI/ML Beam management**

*Type: discussion For: Discussion  
 Source: ZTECorporation,Sanechips*

**Decision: Noted.**

[**R4-2413168**](file:///D:\RAN4%23112\Docs\R4-2413168.zip) **On AI/ML RAN4 Use Cases: Beam Management**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

#### 8.17.3 Testability and interoperability issues for positioning accuracy enhancement

[**R4-2411293**](file:///D:\RAN4%23112\Docs\R4-2411293.zip) **Testability and interoperability issues for positioning accuracy enhancement**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2411342**](file:///D:\RAN4%23112\Docs\R4-2411342.zip) **Discussion on testability and interoperability issues for positioning**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411410**](file:///D:\RAN4%23112\Docs\R4-2411410.zip) **Discussion on Testability and Interoperability issues for positioning accuracy enhancement**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411627**](file:///D:\RAN4%23112\Docs\R4-2411627.zip) **Discussion on testability and interoperability issues for positioning**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411682**](file:///D:\RAN4%23112\Docs\R4-2411682.zip) **Discussions on testability and interoperability for positioning**

*Type: discussion For: Discussion  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

[**R4-2411981**](file:///D:\RAN4%23112\Docs\R4-2411981.zip) **Discussion on testability and interoperability issues for positioning**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2412251**](file:///D:\RAN4%23112\Docs\R4-2412251.zip) **Discussion on testability and interoperability issues for positioning accuracy enhancement**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412695**](file:///D:\RAN4%23112\Docs\R4-2412695.zip) **On AI/ML for positioning**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Discussion paper on AI/ML for positioning. Issues related to use case 2a and 2b are primarily discussed.

**Decision: Noted.**

[**R4-2412767**](file:///D:\RAN4%23112\Docs\R4-2412767.zip) **Discussion on Testability and interoperability issues for positioning accuracy enhancement**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

[**R4-2413039**](file:///D:\RAN4%23112\Docs\R4-2413039.zip) **Discussion on the Interoperability and testability aspects of AI/ML positioning**

*Type: discussion For: Discussion  
 Source: ZTECorporation,Sanechips*

**Decision: Noted.**

[**R4-2413291**](file:///D:\RAN4%23112\Docs\R4-2413291.zip) **Testability and interoperability issues for positioning accuracy enhancement**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

#### 8.17.4 Testability and interoperability issues for CSI compression and CSI prediction

[**R4-2411178**](file:///D:\RAN4%23112\Docs\R4-2411178.zip) **Testability and interoperability issues for CSI compression and CSI prediction**

*Type: discussion For: Discussion  
 Source: Korea Testing Laboratory*

**Decision: Noted.**

[**R4-2411294**](file:///D:\RAN4%23112\Docs\R4-2411294.zip) **Testability and interoperability issues for CSI compression and CSI prediction**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2411343**](file:///D:\RAN4%23112\Docs\R4-2411343.zip) **Discussion on testability and interoperability issues for CSI enh**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411411**](file:///D:\RAN4%23112\Docs\R4-2411411.zip) **Discussion on Testability and Interoperability issues for CSI Compression and Prediction**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411534**](file:///D:\RAN4%23112\Docs\R4-2411534.zip) **Discussion on reference decoder for CSI compression**

*Type: discussion For: Discussion  
 Source: Rohde & Schwarz*

**Decision: Noted.**

[**R4-2411628**](file:///D:\RAN4%23112\Docs\R4-2411628.zip) **Discussion on testability and interoperability issues for CSI compression**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411636**](file:///D:\RAN4%23112\Docs\R4-2411636.zip) **Further study on testability and interoperability issues for AI-CSI**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Noted.**

[**R4-2411711**](file:///D:\RAN4%23112\Docs\R4-2411711.zip) **Discussion on AIML RAN4 CSI Interoperability and testability**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

[**R4-2411786**](file:///D:\RAN4%23112\Docs\R4-2411786.zip) **Summary of e-mail discussion on AI/ML Model for CSI testing Option 3 feasibility study**

*Type: other For: Information  
 Source: Moderator (Qualcomm Incorporated)*

**Decision: Noted.**

[**R4-2411979**](file:///D:\RAN4%23112\Docs\R4-2411979.zip) **Discussion on testability and interoperability issues for CSI compression and CSI prediction**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2412022**](file:///D:\RAN4%23112\Docs\R4-2412022.zip) **On AI/ML-based CSI Feedback**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

[**R4-2412130**](file:///D:\RAN4%23112\Docs\R4-2412130.zip) **On AI/ML Interoperability and Standardization of Testing and Verification for CSI Use Case**

*Type: discussion For: Discussion  
 Source: NTU*

**Decision: Noted.**

[**R4-2412252**](file:///D:\RAN4%23112\Docs\R4-2412252.zip) **Discussion on testability and interoperability issues for CSI compression and CSI prediction**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412332**](file:///D:\RAN4%23112\Docs\R4-2412332.zip) **Views on AI/ML testability for CSI compression and prediction**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

[**R4-2412609**](file:///D:\RAN4%23112\Docs\R4-2412609.zip) **CSI compression option 3 and option 4 considerations**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution considers issues for CSI compression and presents results for the reference model.

**Decision: Noted.**

[**R4-2412768**](file:///D:\RAN4%23112\Docs\R4-2412768.zip) **Discussion on Testability and interoperability issues for CSI compression and CSI prediction**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

[**R4-2412792**](file:///D:\RAN4%23112\Docs\R4-2412792.zip) **Discussion on testability and interoperability issues for AI-CSI**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2413169**](file:///D:\RAN4%23112\Docs\R4-2413169.zip) **On AI/ML RAN4 Use Cases: CSI Interoperability**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

#### 8.17.5 Moderator summary and conclusions

[**R4-2412831**](file:///D:\RAN4%23112\Docs\R4-2412831.zip) **Topic summary for [112][129] NR\_AIML\_air**

*Type: other For: Information  
 Source: Moderator(Qualcomm)*

**Abstract:**

Summary for AI 8.17

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.18 NR MIMO Phase 5

#### 8.18.1 General aspects and work plan

**Work plan**

[**R4-2412134**](file:///D:\RAN4%23112\Docs\R4-2412134.zip) **Work plan for Rel-19 NR MIMO Phase 5**

*Type: Work Plan For: Approval  
 Source: Samsung*

**Decision:** The document was **not treated**.

#### 8.18.2 UE RF requirements

[**R4-2411634**](file:///D:\RAN4%23112\Docs\R4-2411634.zip) **Introduction of 3 Tx to NR specifications**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Qualcomm Technologies Int*

**Abstract:**

In this paper we present our preliminary views on the work that needs to be done to introduce 3 Tx into the NR specifications

**Decision: Noted.**

[**R4-2412095**](file:///D:\RAN4%23112\Docs\R4-2412095.zip) **Discussion of UE RF impact for NR MIMO phase 5**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412135**](file:///D:\RAN4%23112\Docs\R4-2412135.zip) **Views on UE RF impact of NR MIMO Phase 5**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2412348**](file:///D:\RAN4%23112\Docs\R4-2412348.zip) **R19 3Tx single band**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2412575**](file:///D:\RAN4%23112\Docs\R4-2412575.zip) **On RF requirements for Rel-19 NR-MIMO**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413199**](file:///D:\RAN4%23112\Docs\R4-2413199.zip) **UE RF requirements (MIMO Phase5**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

[**R4-2413224**](file:///D:\RAN4%23112\Docs\R4-2413224.zip) **On asymmetric connection scenarios for NR MIMO Phase 5**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

We discuss how the objective can be translated to a RAN4 requirement concept, while respecting the associated constraints in the WID

**Decision: Noted.**

[**R4-2413367**](file:///D:\RAN4%23112\Docs\R4-2413367.zip) **On UE RF requirements impact for NR MIMO Phase 5**

*Type: other For: Approval  
 Source: Ericsson India Private Limited*

**Decision: Noted.**

#### 8.18.3 RRM core requirements

#### 8.18.4 Moderator summary and conclusions

[**R4-2412832**](file:///D:\RAN4%23112\Docs\R4-2412832.zip) **Topic summary for [112][130] NR\_MIMO\_Ph5\_UE**

*Type: other For: Information  
 Source: Moderator(Samsung)*

**Abstract:**

Summary for AI 8.18.1, 8.18.2

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.19 Evolution of NR duplex operation: Sub-band full duplex (SBFD)

### 8.20 Study on solutions for Ambient IoT (Internet of Things) in NR

MCC: This ia a RAN1-led SID. The TR 38.769 is under RAN1 control as it is a RAN1-led TR and all TPs that are approved in RAN4 need to be sent to RAN1 for including it into their TR 38.769.

#### 8.20.1 General aspects

[**R4-2411071**](file:///D:\RAN4%23112\Docs\R4-2411071.zip) **Discussion on the AIoT LLS for passive devices in RAN4**

*Type: discussion For: Discussion  
 Source: CATT*

**Abstract:**

MCC: This paper discusses the AIoT co-existence simulation is on-going. SINR is agreed to be used for the performance metric for calibration purpose. CATT thinks it should be discussed how to handle this issue in the limited timeline. As the co-existence simulation focuses on passive devices, this contribution only discusses RAN4 LLS for passive devices, i.e. Device 1 and Device 2a.

**Decision: Noted.**

[**R4-2412970**](file:///D:\RAN4%23112\Docs\R4-2412970.zip) **A-IoT general overview**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our thoughts on some of general issues for A-IoT RAN4 study

**Decision: Noted.**

**TP**

[**R4-2412879**](file:///D:\RAN4%23112\Docs\R4-2412879.zip) **draft TP to TR 38.769 for Co-existence evaluation assumptions**

*Type: pCR For: Approval  
 38.769 v0.0.1 CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: The TR 38.769 is under RAN1 as it is a RAN1-led TR and all TPs that are approved need to be sent to RAN1 for including it into their TR 38.769.

**Decision:** The document was **not treated**.

#### 8.20.2 Co-existence study for ambient IoT and NR/LTE

[**R4-2411770**](file:///D:\RAN4%23112\Docs\R4-2411770.zip) **collection of calibration data for A-IoT**

*Type: discussion For: Discussion  
 Source: CMCC*

**Abstract:**

MCC: This contribution is collection of calibration data. It is assumed that it will be made available during the meeting.

**Decision: Withdrawn.**

##### 8.20.2.1 Deployment scenarios and spectrum usage

[**R4-2411536**](file:///D:\RAN4%23112\Docs\R4-2411536.zip) **AIoT deployment scenario for D1T1**

*Type: discussion For: Discussion  
 Source: Sony*

**Decision: Noted.**

[**R4-2411606**](file:///D:\RAN4%23112\Docs\R4-2411606.zip) **Discussion on the deployment scenarios and spectrum usage of Ambient IoT and NR**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411767**](file:///D:\RAN4%23112\Docs\R4-2411767.zip) **Deployment scenario and spectrum usage**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411865**](file:///D:\RAN4%23112\Docs\R4-2411865.zip) **Discussion on deployment scenarios and spectrum usage for ambient IoT**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2412015**](file:///D:\RAN4%23112\Docs\R4-2412015.zip) **Discussion on deployment scenarios and spectrum usage for AIoT**

*Type: discussion For: Discussion  
 Source: China Telecom Corporation Ltd.*

**Decision: Noted.**

[**R4-2412063**](file:///D:\RAN4%23112\Docs\R4-2412063.zip) **Discussion on the deployment and spectrum usage of AIoT**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412562**](file:///D:\RAN4%23112\Docs\R4-2412562.zip) **Discussion on Ambient IoT deployment scenarios and spectrum usage**

*Type: discussion For: Discussion  
 Source: Samsung*

**Abstract:**

AIoT scenarios discussion

**Decision: Noted.**

[**R4-2412676**](file:///D:\RAN4%23112\Docs\R4-2412676.zip) **Discussion on Ambient IoT deployment scenarios for D1T1**

*Type: discussion For: Discussion  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

[**R4-2412696**](file:///D:\RAN4%23112\Docs\R4-2412696.zip) **Discussion on deployment scenarios and spectrum usage**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412727**](file:///D:\RAN4%23112\Docs\R4-2412727.zip) **on deployment scenarios and spectrum usage for A-IoT**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2412880**](file:///D:\RAN4%23112\Docs\R4-2412880.zip) **Discussion on A-IoT deployment scenarios and spectrum usage**

*Type: discussion For: Discussion  
 38.769 v CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412917**](file:///D:\RAN4%23112\Docs\R4-2412917.zip) **On AIoT deployment scenarios and spectrum usage**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

[**R4-2412969**](file:///D:\RAN4%23112\Docs\R4-2412969.zip) **A-IoT deployment scenario and spectrum usage**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our overview for A-IoT deployment scenario and spectrum usage.

**Decision: Noted.**

**Withdrawn**

[**R4-2411951**](file:///D:\RAN4%23112\Docs\R4-2411951.zip) **Discussion on deployment scenarios and spectrum usage for AIoT**

*Type: discussion For: Discussion  
 Source: China Telecom Corporation Ltd.*

**Abstract:**

MCC: This was not made available at tdoc submission deadline.

**Decision: Withdrawn.**

##### 8.20.2.2 Co-existence evaluations

[**R4-2411123**](file:///D:\RAN4%23112\Docs\R4-2411123.zip) **Discussion co-existence evaluations for Ambient IoT in NR**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411124**](file:///D:\RAN4%23112\Docs\R4-2411124.zip) **Co-existence calibration results for Ambient IoT in NR**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

[**R4-2411607**](file:///D:\RAN4%23112\Docs\R4-2411607.zip) **Discussion on the coexistence study of Ambient IoT and NR**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2411765**](file:///D:\RAN4%23112\Docs\R4-2411765.zip) **Discussion on A-IoT co-existence evaluation**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411866**](file:///D:\RAN4%23112\Docs\R4-2411866.zip) **Discussion on co-existence evaluation for ambient IoT and NR-LTE**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2412064**](file:///D:\RAN4%23112\Docs\R4-2412064.zip) **Discussion on the co-existence of AIoT**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412563**](file:///D:\RAN4%23112\Docs\R4-2412563.zip) **Discussion on coex evaluation assumptions**

*Type: discussion For: Discussion  
 Source: Samsung*

**Abstract:**

AIoT coex assumptions

**Decision: Noted.**

[**R4-2412697**](file:///D:\RAN4%23112\Docs\R4-2412697.zip) **Discussion on Co-existence evaluations**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412881**](file:///D:\RAN4%23112\Docs\R4-2412881.zip) **A-IoT co-existence evaluations**

*Type: other For: Approval  
 38.769 v CR- rev Cat: (Rel-19)  
  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412918**](file:///D:\RAN4%23112\Docs\R4-2412918.zip) **On Ambient IoT Coexistence Evaluation**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

[**R4-2412973**](file:///D:\RAN4%23112\Docs\R4-2412973.zip) **Coexisting study simulation assumptions and initial results**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we discuss the simulation assumptions for coexisting for A-IoT

**Decision: Noted.**

#### 8.20.3 RF requirement impact

##### 8.20.3.1 Ambient IoT BS

[**R4-2411084**](file:///D:\RAN4%23112\Docs\R4-2411084.zip) **A-IoT BS feasibility and requirements**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411766**](file:///D:\RAN4%23112\Docs\R4-2411766.zip) **Discussion on A-IoT BS RF requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2412065**](file:///D:\RAN4%23112\Docs\R4-2412065.zip) **Discussion on the RF requirement of AIoT BS**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412698**](file:///D:\RAN4%23112\Docs\R4-2412698.zip) **Discussion on RF requirement of Ambient IoT BS**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412968**](file:///D:\RAN4%23112\Docs\R4-2412968.zip) **A-IoT BS RF overview**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our overview for A-IoT BS RF requirements.

**Decision: Noted.**

[**R4-2413282**](file:///D:\RAN4%23112\Docs\R4-2413282.zip) **RF requirements for Ambient IoT BS**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

##### 8.20.3.2 Ambient IoT device

[**R4-2411072**](file:///D:\RAN4%23112\Docs\R4-2411072.zip) **Discussion on AIoT device RF requirement**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411537**](file:///D:\RAN4%23112\Docs\R4-2411537.zip) **Further considerations on the ambient IoT device implementation and RF aspect**

*Type: discussion For: Discussion  
 Source: Sony*

**Decision: Noted.**

[**R4-2411768**](file:///D:\RAN4%23112\Docs\R4-2411768.zip) **Discussion on A-IoT device RF requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411867**](file:///D:\RAN4%23112\Docs\R4-2411867.zip) **Discussion on RF requirements impact for ambient IoT device**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2412066**](file:///D:\RAN4%23112\Docs\R4-2412066.zip) **Discussion on the RF requirement of AIoT device**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412699**](file:///D:\RAN4%23112\Docs\R4-2412699.zip) **Discussion on RF requirement of Ambient IoT device**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412972**](file:///D:\RAN4%23112\Docs\R4-2412972.zip) **A-IoT UE RF overview**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our overview for A-IoT UE RF.

**Decision: Noted.**

[**R4-2413030**](file:///D:\RAN4%23112\Docs\R4-2413030.zip) **On the RF requirements for Ambient IoT Device**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2413321**](file:///D:\RAN4%23112\Docs\R4-2413321.zip) **Energy harvesting considerations**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

[**R4-2413455**](file:///D:\RAN4%23112\Docs\R4-2413455.zip) **Discussion on Ambient IoT Device RF requirement impact**

*Type: discussion For: Discussion  
 Source: LG Electronics UK*

**Decision: Noted.**

##### 8.20.3.3 Intermediate note (UE)

[**R4-2411085**](file:///D:\RAN4%23112\Docs\R4-2411085.zip) **A-IoT intermediate UE feasibility and requirements**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411769**](file:///D:\RAN4%23112\Docs\R4-2411769.zip) **Discussion on A-IoT intermediate UE RF requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411868**](file:///D:\RAN4%23112\Docs\R4-2411868.zip) **Discussion on RF requirements impact for intermediate node (UE)**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2412067**](file:///D:\RAN4%23112\Docs\R4-2412067.zip) **Discussion on the RF requirement of intermediate UE**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412700**](file:///D:\RAN4%23112\Docs\R4-2412700.zip) **Discussion on RF requirement of Intermediate node (UE)**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412971**](file:///D:\RAN4%23112\Docs\R4-2412971.zip) **A-IoT UE as intermediate node RF overview**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our overview for A-IoT UE as intermediate node RF.

**Decision: Noted.**

[**R4-2413322**](file:///D:\RAN4%23112\Docs\R4-2413322.zip) **CW cancellation capability**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

#### 8.20.4 Moderator summary and conclusions

[**R4-2412833**](file:///D:\RAN4%23112\Docs\R4-2412833.zip) **Topic summary for [112][131] FS\_Ambient\_IoT\_solutions\_part1**

*Type: other For: Information  
 Source: Moderator(CMCC)*

**Abstract:**

Summary for AI 8.20, 8.20.1, 8.20.2

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

[**R4-2412834**](file:///D:\RAN4%23112\Docs\R4-2412834.zip) **Topic summary for [112][132] FS\_Ambient\_IoT\_solutions\_part2**

*Type: other For: Information  
 Source: Moderator(Huawei)*

**Abstract:**

Summary for AI 8.20.3

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.21 Enhancements of network energy savings for NR

### 8.22 Low-power wake-up signal and receiver for NR (LP-WUS/WUR)

#### 8.22.1 General aspects

[**R4-2411227**](file:///D:\RAN4%23112\Docs\R4-2411227.zip) **Further consideration on general aspects for Rel-19 LP-WUS**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2412057**](file:///D:\RAN4%23112\Docs\R4-2412057.zip) **Discussion on LP-WUS general**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412975**](file:///D:\RAN4%23112\Docs\R4-2412975.zip) **On general issues for WUR**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our overview for WUR.

**Decision: Noted.**

#### 8.22.2 UE RF requirements for LP-WUS/WUR

[**R4-2411538**](file:///D:\RAN4%23112\Docs\R4-2411538.zip) **views on requirements of the low-power wake-up receiver**

*Type: discussion For: Discussion  
 Source: Sony*

**Decision: Noted.**

##### 8.22.2.1 System parameters

[**R4-2411095**](file:///D:\RAN4%23112\Docs\R4-2411095.zip) **Further discussion on system parameters for LP-WUS**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411495**](file:///D:\RAN4%23112\Docs\R4-2411495.zip) **Discussion on systems parameters for LP-WUR**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2411653**](file:///D:\RAN4%23112\Docs\R4-2411653.zip) **System parameters for LP-WUR**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2411730**](file:///D:\RAN4%23112\Docs\R4-2411730.zip) **(NR\_LPWUS-Core) Discussion on LP-WUS UE system parameters requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411895**](file:///D:\RAN4%23112\Docs\R4-2411895.zip) **Discussion on system parameters for LP-WUS/WUR**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412058**](file:///D:\RAN4%23112\Docs\R4-2412058.zip) **Discussions on LP-WUS system parameters**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412976**](file:///D:\RAN4%23112\Docs\R4-2412976.zip) **On system paramter for WUR**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our overview on the system parameter for WUR RF requirement perspective.

**Decision: Noted.**

##### 8.22.2.2 Rx requirements of REFSENS, ASCS and ACS

[**R4-2411228**](file:///D:\RAN4%23112\Docs\R4-2411228.zip) **Further consideration on UE RF REFSENS, ACS, ASCS requirements for Rel-19 LP-WUS**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2411494**](file:///D:\RAN4%23112\Docs\R4-2411494.zip) **Discussion on RX requirements of REFSENS for LP-WUR**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2411645**](file:///D:\RAN4%23112\Docs\R4-2411645.zip) **On Low-power Wake-up Receiver for NR**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411654**](file:///D:\RAN4%23112\Docs\R4-2411654.zip) **Fundamental RX requirements for LP-WUR**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2411694**](file:///D:\RAN4%23112\Docs\R4-2411694.zip) **Discussion on UE RF requirements for LP-WUR**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2411731**](file:///D:\RAN4%23112\Docs\R4-2411731.zip) **(NR\_LPWUS-Core) Discussion on LP-WUS UE RF Rx requirements of REFSENS, ASCS and ACS**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411896**](file:///D:\RAN4%23112\Docs\R4-2411896.zip) **Discussion on REFSENS, ASCS, ACS for LP-WUR**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412059**](file:///D:\RAN4%23112\Docs\R4-2412059.zip) **Discussions on LP-WUS REFSENS, ASCS and ACS**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412276**](file:///D:\RAN4%23112\Docs\R4-2412276.zip) **Discussion on REFSENS and ASCS for the LP-WUS/WUR**

*Type: discussion For: Discussion  
 Source: LG Electronics France*

**Decision: Noted.**

[**R4-2412979**](file:///D:\RAN4%23112\Docs\R4-2412979.zip) **WUR RF requirement REFSESN ASC ASCS**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our view on the WUR RF requirement of REFSENS, ASC, ASCS

**Decision: Noted.**

[**R4-2413223**](file:///D:\RAN4%23112\Docs\R4-2413223.zip) **On UE Rx requirements for the LPWUR**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

We propose including connected mode and FR2 bands, along with identifying a need to establish the definition of SNR for OOK signals to facilitate future work.

**Decision: Noted.**

##### 8.22.2.3 Rx requirements of IBB, OBB, intermodulation, spurious emissions and others

[**R4-2411229**](file:///D:\RAN4%23112\Docs\R4-2411229.zip) **Further consideration on UE RF other Rx requirements for Rel-19 LP-WUS**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2411655**](file:///D:\RAN4%23112\Docs\R4-2411655.zip) **Other RX requirements for LP-WUR**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

[**R4-2411732**](file:///D:\RAN4%23112\Docs\R4-2411732.zip) **(NR\_LPWUS-Core) Discussion on LP-WUS UE RF Rx requirements of IBB, OBB, intermodulation, spurious emissions and others**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2411897**](file:///D:\RAN4%23112\Docs\R4-2411897.zip) **Discussion on receiver characteristics for LP-WUR**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412275**](file:///D:\RAN4%23112\Docs\R4-2412275.zip) **Discussion on IBB and OBB requirements for LP-WUS**

*Type: discussion For: Discussion  
 Source: LG Electronics France*

**Decision: Noted.**

[**R4-2412978**](file:///D:\RAN4%23112\Docs\R4-2412978.zip) **WUR RF requirement other than REFSENS**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our view on the WUR RF requirement of IBB, OBB, intermodulation, spurious emissions and others .

**Decision: Noted.**

##### 8.22.2.4 Testability for UE RF requirements

[**R4-2411230**](file:///D:\RAN4%23112\Docs\R4-2411230.zip) **Further consideration on UE RF testability issue for Rel-19 LP-WUS**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2411656**](file:///D:\RAN4%23112\Docs\R4-2411656.zip) **Testability aspects of LP-WUR**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2411898**](file:///D:\RAN4%23112\Docs\R4-2411898.zip) **Discussion on testability for UE RF requirements**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2412061**](file:///D:\RAN4%23112\Docs\R4-2412061.zip) **Discussions on LP-WUS Testability**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2412977**](file:///D:\RAN4%23112\Docs\R4-2412977.zip) **On WUR RF requirement testability**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our overview on the WUR RF requirement testability issue

**Decision: Noted.**

#### 8.22.3 BS RF requirements for LP-WUS/WUR

#### 8.22.4 RRM core requirements for LP-WUS/WUR

#### 8.22.5 Moderator summary and conclusions

[**R4-2412835**](file:///D:\RAN4%23112\Docs\R4-2412835.zip) **Topic summary for [112][133] NR\_LPWUS\_UERF**

*Type: other For: Information  
 Source: Moderator(VIVO)*

**Abstract:**

Summary for AI 8.22, 8.22.1, 8.22.2

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

### 8.23 NR mobility enhancements Phase 4

### 8.24 XR for NR Phase 3

### 8.25 Non-Terrestrial Networks (NTN) for NR Phase 3

### 8.26 Non-Terrestrial Networks (NTN) for Internet of Things (IoT) Phase 3

## 9 Liaison output to other groups and related issues

The following guidance are provided for maintenance work under AI 4 ~ AI 5:

‒ For maintenance agenda AI 4 (Rel-15/16/17) and AI 5 (Rel-18), formal CRs are expected and multiple CRs per company in the lowest agenda are allowed. For tracking the changes easily, it expected that one batch of CRs (Cat-F/A/…) will just cover a single topic/WI rather than multiple topics/WIs and Cat-F CR with corresponding Cat-A CRs needs be submitted under the same agenda.

‒ When submitting contributions to AI 4, AI 5.2, AI 5.34, please add (WI\_code) in the beginning of titles for both discussion files and CRs to facilitate moderators and session chairs handling.

‒ When reserving the tdoc number, please use the correct WI code rather than simply using TEI and fill the column of “Related WIs” in your reservation spreadsheet. If you submit a draft CR with TEI as WI code, please inform session chair.

‒ For all the endorsed draft CRs in this bis meeting, please re-submit them in the next ordinary meeting.

‒ The contributions corresponding to incoming LS for Rel-15/16/17 are expected to be submitted in AI 9.

‒ The contributions corresponding to incoming LS for Rel-18/19 are expected to be submitted to (sub-) agenda dedicated to the individual WIs. If there is no dedicated agenda, please submit to AI 5.2 or AI 5.34 depending on whether it is spectrum related topic or non-spectrum related topic.

### 9.1 R17 related

[**R4-2412923**](file:///D:\RAN4%23112\Docs\R4-2412923.zip) **Reply to LS on IE supportedBandwidthCombinationSetIntraENDC and IE intraBandENDC-Support**

*Type: LS out For: Approval  
 to RAN2  
 Source: Google*

[MCC]: This will be treated in email thread [134].

**Decision:** The document was **not treated**.

### 9.2 R15, R16 related

### 9.3 Moderator summary and conclusions

[**R4-2412836**](file:///D:\RAN4%23112\Docs\R4-2412836.zip) **Topic summary for [112][134] NR\_reply\_LS\_UE\_RF**

*Type: other For: Information  
 Source: Moderator(Apple)*

**Abstract:**

Summary for AI 9.1, 9.2

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

## 10 RAN task and other topics

### 10.1 Specification quality improvement (RP-240782)

It is expected to focus on identifying the key issues. No CR or draft CR is expected for TS 38.101-1/-2/-3. The draft CR for TS 38.133 can be submitted according to the work split for offline discussion only. No need to propose an SI to capture the agreements.

[**R4-2412837**](file:///D:\RAN4%23112\Docs\R4-2412837.zip) **Topic summary for [112][135] UERF\_Spec\_Improvement**

*Type: other For: Information  
 Source: Moderator(Qualcomm)*

**Abstract:**

Summary for AI 10.1.1

**Decision:** The document was **not treated**.

**Miniutes and conlcusions in the first round**

**Newly allocated tdocs for approval**

#### 10.1.1 UE RF specifications TS 38.101-1/-2/-3

[**R4-2411146**](file:///D:\RAN4%23112\Docs\R4-2411146.zip) **Simplifying ?RIB,c and ?TIB,c tables**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2411147**](file:///D:\RAN4%23112\Docs\R4-2411147.zip) **Simplifying or removing MSD tables**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2412482**](file:///D:\RAN4%23112\Docs\R4-2412482.zip) **RF specification quality improvement**

*Type: discussion For: Discussion  
 Source: Anritsu Limited*

**Decision: Noted.**

##### 10.1.1.1 Technical wording ambiguities and Table modifications

[**R4-2411111**](file:///D:\RAN4%23112\Docs\R4-2411111.zip) **On technical wording ambiguities and table modifications for UE RF specs improvement**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411237**](file:///D:\RAN4%23112\Docs\R4-2411237.zip) **Technical wording ambiguities and Table modifications handling**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Abstract:**

This contribution discusses handling of delta TIBC and RIBC, wording ambiguities, modifiedMPR and NOTEs in a table.

**Decision: Noted.**

[**R4-2411313**](file:///D:\RAN4%23112\Docs\R4-2411313.zip) **Views on technical wording ambiguities**

*Type: discussion For: Discussion  
 Source: Samsung,CHTTL*

**Decision: Noted.**

[**R4-2411676**](file:///D:\RAN4%23112\Docs\R4-2411676.zip) **Spec improvements: technical wording ambiguities**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose that changes to technical wording are minimized.

**Decision: Noted.**

[**R4-2411838**](file:///D:\RAN4%23112\Docs\R4-2411838.zip) **Considerations on specification improvement for table modification**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision: Noted.**

[**R4-2413066**](file:///D:\RAN4%23112\Docs\R4-2413066.zip) **Further MSD simplifications**

*Type: other For: Discussion  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This paper presents views on simplifying HPUE inter-band MSD requirements.

**Decision: Noted.**

[**R4-2413068**](file:///D:\RAN4%23112\Docs\R4-2413068.zip) **Update on Harmonic MSD simplification**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This document proposes additional harmonic measurement toward simplifying MSD requirements due to harmonic interference.

**Decision: Noted.**

[**R4-2413338**](file:///D:\RAN4%23112\Docs\R4-2413338.zip) **On UE RF specifications table improvement**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

Listing of supported band combinations

When opening RAN4 UE specification TS 38.101-1 it is evident that the dominant part of the specification content is tables listing band combinations. The first tables list simply what DL and UL configurations are supported and as one moves on in the specification additional information is added on e.g. supported channel bandwidths within the listed DL and UL bands. Listing the same band combinations multiple times just adding additional information is needed simply because it is not currently practical to condense all the information and requirements for a single DL configuration into a single table.

- Observation 1: Currently it is not possible to condense all the information and requirements for a single DL configuration into a single table.

As a result, RAN#102 commissioned an activity to identify a new methodology with a small working party in conjunction with ETSI MCC to handle capturing a large number of band combinations. The status of this work was last presented at RAN#103 in [4]. The intention of this work is in long term to shift the listing of the band combinations from the Word-based specification to a database managed by MCC and then simply reference from the written Word-based specification.

- Observation 2: The long-term goal is to move the listing of band combinations to a database managed by MCC.

However, due to the complexity of the information related to the band combinations, this may take significant time and RAN4 can in the meantime investigate whether additional simplification and removal of redundancy can be achieved.

Definition of UE relaxations per band combination

A starting point to reduce the length and number of tables for band combinations is, as suggested in [3], to investigate if some of the information/requirements now spread across multiple tables listing band combinations can be merged into a single table listing the band combination.

- Observation 3: Multiple tables are now listing band combinations meaning that there are numerous long tables in the specification.

UE relaxations per band combination, e.g. ΔTIB,c and ΔRIB,c and even MSD in many cases, have the same value dependent on the type of issue, e.g. harmonics, creating the need for the relaxation. Even so, these relaxation values are currently listed per band combination in multiple tables for each type of issue.

- Observation 4: Currently the RAN4 UE RF specification has separate tables for each UE relaxation type, e.g. MSD due to harmonica mixing issues.

A suggestion is to list relaxation per UE issue/type in a single table and then list all the types of issues for the specific band combinations in list of supported band combinations. By grouping a list of issues per band combination would provide an overview of the individual band combinations combined need for UE relaxation.

- Observation 5: Providing a list of supported band combinations together with their “issues” requiring relaxation would provide an overview instead of spreading the information over multiple tables in the specification.

In a practical example for TS 38.101-1 only targeting Clause 7 this would mean introducing the following 8 as shown in the following in Table 1-8. The Reasoning for the values proposed in these tables is given in Annex A which shows the statistics and investigations conducted for the currently defined UE relaxations in TS 38.101-1.

With the agreement of the LowerMSD capability signaling only a worst-case MSD value is required for each MSD type and order, including band-group relations Table 1 to Table 8 in the following has been made using the highest MSD for each MSD type and MSD order. If the MSD is expected to be much better than specified in the generic requirements it is expected that UE vendors signal the improved MSD Class for the combination.

- Observation 6: Annex A show the statistics and investigations conducted for the currently defined UE relaxations in TS 38.101-1 clause 7.

This contribution also proposes new table structure for 38.101-1 presented in Table 1-9:

**Decision: Noted.**

[**R4-2413065**](file:///D:\RAN4%23112\Docs\R4-2413065.zip) **Cross-band isolation MSD simplification**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This document proposes some simplifications for cross-band isolation MSD.

**Decision:** The document was **withdrawn**.

##### 10.1.1.2 Work practice enhancements

[**R4-2411112**](file:///D:\RAN4%23112\Docs\R4-2411112.zip) **On work practice enhancements for UE RF specs improvement**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411238**](file:///D:\RAN4%23112\Docs\R4-2411238.zip) **On PRD approach**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Abstract:**

This contribution discusses if we should adopt PRD concept in RAN4.

Huawei provides the following observations and proposals:

- Observation 1: PRDs in RAN5 do not contain technical aspects, e.g., technical recommendation, while the proposed PRDs in [[R4-2407581](file:///D:\RAN4%23112\Docs\R4-2407581.zip)] intend to contain technical aspects. Thus, the concept of RAN5 PRDs may not be introduced into RAN4 as they are.

- Observation 2: PRDs including technical instructions may impact on the outcome of T-Doc following the instructions in the PRDs. Hence, once we start the new approach, we need to commit to the sustainability of the PRDs.

- Observation 3: Sustainability should be ensured. Otherwise, the situation in the future may be worse than now.

- Observation 4: Developing and sustaining the PRDs doesn’t come for free so that the gain of the introduction of the PRDs must be positive. Hence, topic and its scope selections must need great care.

- Observation 5: In principle, PRDs should contain the latest information and well documented in a way to give people who are not familiar with RAN4 clear instructions. Otherwise, we don’t need PRDs (A list of the approved WF would be enough).

- Observation 6: At least when the endorsed content for a PRD is reflected in the corresponding PRD and how do we promote utilization of the PRD should be sufficiently discussed before introducing the PRD.

- Proposal 1: Before making a decision of the introduction of the PRD, we should start with a trial (the corresponding PRD is not in 3gpp ftp server) with a limited scope to check if it is manageable and the usefulness of it. Depending on the outcome, we make a decision.

- Proposal 2: Encourage companies to share possible areas with issues that they have encountered and expected outcome with specific details if we further discuss the introduction of the PRD in the future meetings.

**Decision: Noted.**

[**R4-2413320**](file:///D:\RAN4%23112\Docs\R4-2413320.zip) **Specification writing and CR practices for better efficiency and transparency**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

Qualcomm discussed specification drafting issues and CR handling for the benefit of the whole WG and made the following proposals:

- Proposal 1: Do not create hanging paragraphs even if it seems harmless at the time of creating one

- Proposal 2: Do not use notes in tables for requirements that apply every cell/line in the table. Use text above the table instead

- Proposal 3: Use short and clear sentences and create a table with matrix of conditions if requirement needs one

- Proposal 4: If the functional objective of the requirement is already in the specification, refer to existing clauses with added conditions or expansions instead of duplicating same text or tables or figures.

- Proposal 5: Submit Cat F CR only to earliest release where feature has been specified and handle changes that have same functional objective as mirror CRs

- Proposal 6: Do not included mirrored changes from eaerlier releases in the later release cat F CRs

- Proposal 7: Share MPR/AMPR proposals as matlab code as text in the submission document for verification purposes

As a conclusion, the correct knowledge of the contents of drafting rules [2] and working methods [3] should be in every delegates skillset.

**Decision: Noted.**

##### 10.1.1.3 Larger specification structure enhancementsf

[**R4-2411113**](file:///D:\RAN4%23112\Docs\R4-2411113.zip) **On larger specification structure enhancements for UE RF specs improvement**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2411239**](file:///D:\RAN4%23112\Docs\R4-2411239.zip) **Necessity of key aspects to select a specification structure**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Abstract:**

This paper discusses some aspects when we make a decision on which specification structure should be selected.

The contribution derived following one observation and one proposal.

- Observation: In order to decide which specification structure option RAN4 adopts and to develop a new specification structure(s) if any, RAN4 may need key aspects/criteria for evaluation for each of the candidate specification structures.

- Proposal: RAN4 should discuss possible key aspects to evaluate and compare each of the possible specification structures before selecting one specification structure when developing new specifications like 6G.

**Decision: Noted.**

[**R4-2413317**](file:///D:\RAN4%23112\Docs\R4-2413317.zip) **Further considerations on specification structure enhancement**

*Type: other For: Approval  
 Source: ZTE Corporation, Sanechips*

**Abstract:**

In this paper, ZTE provide views on specification structure enhancement. The following proposals are provided.

Optimization at this stage.

- Proposal 1. It is suggested to add a number for the constituent sub-file name in the zip file so as to have the zip file in order (See figure 2) with blue colour highlighted.

- Proposal 2. It is suggested to fix or add the missing definitions, symbols and abbreviations in the spec.

Optimization for future spec structure.

- Proposal 3. For future spec structure optimization, it can be optimized with the guidelines as below.

­ Re-organize the specification zip file by the features, each of the constituent sub-file specifies a certain feature, such as single carrier, CA, DC, etc.

­ All of the requirements corresponding to a certain feature will be specified in a certain sub-file.

­ In each sub-file, the clauses could be further specified with a second level sub-clause to reflect the requirements of a sub-feature.

­ Capture the above optimization as one of the candidate for future spec structure.

**Decision: Noted.**

#### 10.1.2 RRM specification TS 38.133

### 10.2 Solution to enable HPUE maximum transmit power in downlink CA with single UL transmission (RP-241625)

**The tdocs under this agenda won’t be treated in the first round and the way forward after offline discussions can be treated in the 2nd round**

[**R4-2411098**](file:///D:\RAN4%23112\Docs\R4-2411098.zip) **On solution to enable HPUE maximum transmit power in downlink CA with single UL transmission**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision:** The document was **not treated**.

[**R4-2411173**](file:///D:\RAN4%23112\Docs\R4-2411173.zip) **Views on RAN task for CA power class support**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision:** The document was **not treated**.

[**R4-2411677**](file:///D:\RAN4%23112\Docs\R4-2411677.zip) **Enabling HPUE maximum transmit power in downlink CA with a single configured UL**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

In this contribution we propose to enable HPUE maximum transmit power for DL-only CA without new or redefined capabilties.

**Decision:** The document was **not treated**.

[**R4-2411888**](file:///D:\RAN4%23112\Docs\R4-2411888.zip) **Views on power class indication for HPUE DL CA with single UL transmission**

*Type: discussion For: Discussion  
 Source: ZTE Corporation, Sanechips*

**Decision:** The document was **not treated**.

[**R4-2412082**](file:///D:\RAN4%23112\Docs\R4-2412082.zip) **Discussion on enable maximum transmit power in downlink CA with single UL transmission**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision:** The document was **not treated**.

[**R4-2412354**](file:///D:\RAN4%23112\Docs\R4-2412354.zip) **RAN task R17 power class applicability related**

*Type: other For: Approval  
 Source: OPPO*

**Decision:** The document was **not treated**.

[**R4-2413026**](file:///D:\RAN4%23112\Docs\R4-2413026.zip) **Discussion on NR CA power class for single configured UL**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

MCC: This was not made available at tdoc submission deadline.

**Decision:** The document was **not treated**.

[**R4-2413140**](file:///D:\RAN4%23112\Docs\R4-2413140.zip) **Support for HPUE with DL CA with single UL CC configured**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Decision:** The document was **not treated**.

**Draft CR**

[**R4-2411099**](file:///D:\RAN4%23112\Docs\R4-2411099.zip) **draftCR to TS 38.101-1 on enabling HPUE maximum transmission power for downlink CA with single uplink transmission(Rel-15)**

*Type: draftCR For: Endorsement  
 38.101-1 v15.26.0 CR- rev Cat: F (Rel-15)  
  
 Source: CATT*

**Abstract:**

Solution to enable HPUE maximum transmission power for downlink CA with single uplink transmission.

**Decision:** The document was **not treated**.

[**R4-2411100**](file:///D:\RAN4%23112\Docs\R4-2411100.zip) **draftCR to TS 38.101-2 on enabling HPUE maximum transmission power for downlink CA with single uplink transmission(Rel-15)**

*Type: draftCR For: Endorsement  
 38.101-2 v15.26.0 CR- rev Cat: F (Rel-15)  
  
 Source: CATT*

**Abstract:**

Solution to enable HPUE maximum transmission power for downlink CA with single uplink transmission.

**Decision:** The document was **not treated**.

[**R4-2411101**](file:///D:\RAN4%23112\Docs\R4-2411101.zip) **draftCR to TS 38.101-1 on enabling HPUE maximum transmission power for downlink CA with single uplink transmission(Rel-16)**

*Type: draftCR For: Endorsement  
 38.101-1 v16.20.0 CR- rev Cat: F (Rel-16)  
  
 Source: CATT*

**Abstract:**

Involved texts in subclause 6.2A.1.3 is not the same as in Rel-15, hence it is Cat-F

**Decision:** The document was **not treated**.

[**R4-2411102**](file:///D:\RAN4%23112\Docs\R4-2411102.zip) **draftCR to TS 38.101-2 on enabling HPUE maximum transmission power for downlink CA with single uplink transmission(Rel-16)**

*Type: draftCR For: Endorsement  
 38.101-2 v16.20.0 CR- rev Cat: A (Rel-16)  
  
 Source: CATT*

**Abstract:**

MCC: This was not made available at tdoc submission deadline. This is a Rel-16 draftCR.

**Decision:** The document was **not treated**.

[**R4-2411103**](file:///D:\RAN4%23112\Docs\R4-2411103.zip) **draftCR to TS 38.101-1 on enabling HPUE maximum transmission power for downlink CA with single uplink transmission(Rel-17)**

*Type: draftCR For: Endorsement  
 38.101-1 v17.14.0 CR- rev Cat: F (Rel-17)  
  
 Source: CATT*

**Abstract:**

Involved texts in subclause 6.2A.1.3 is not the same as in Rel-16, hence it is Cat-F

**Decision:** The document was **not treated**.

[**R4-2411104**](file:///D:\RAN4%23112\Docs\R4-2411104.zip) **draftCR to TS 38.101-2 on enabling HPUE maximum transmission power for downlink CA with single uplink transmission(Rel-17)**

*Type: draftCR For: Endorsement  
 38.101-2 v17.14.0 CR- rev Cat: F (Rel-17)  
  
 Source: CATT*

**Abstract:**

Involved texts in subclause 6.2A.1.3 is not the same as in Rel-16, hence it is Cat-F

**Decision:** The document was **not treated**.

[**R4-2411105**](file:///D:\RAN4%23112\Docs\R4-2411105.zip) **draftCR to TS 38.101-1 on enabling HPUE maximum transmission power for downlink CA with single uplink transmission(Rel-18)**

*Type: draftCR For: Endorsement  
 38.101-1 v18.6.0 CR- rev Cat: A (Rel-18)  
  
 Source: CATT*

**Abstract:**

MCC: This was not made available at tdoc submission deadline.

**Decision:** The document was **not treated**.

[**R4-2411106**](file:///D:\RAN4%23112\Docs\R4-2411106.zip) **draftCR to TS 38.101-2 on enabling HPUE maximum transmission power for downlink CA with single uplink transmission(Rel-18)**

*Type: draftCR For: Endorsement  
 38.101-2 v18.6.0 CR- rev Cat: A (Rel-18)  
  
 Source: CATT*

**Abstract:**

MCC: This was not made available at tdoc submission deadline.

**Decision:** The document was **not treated**.

[**R4-2411678**](file:///D:\RAN4%23112\Docs\R4-2411678.zip) **HPUE maximum transmit power in downlink CA with a single configured UL**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2395 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to enable HPUE maximum output power for DL-only CA

**Decision:** The document was **not treated**.

[**R4-2411679**](file:///D:\RAN4%23112\Docs\R4-2411679.zip) **HPUE maximum transmit power in downlink CA with a single configured UL**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2396 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to enable HPUE maximum output power for DL-only CA. MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

[**R4-2413138**](file:///D:\RAN4%23112\Docs\R4-2413138.zip) **(Power\_Limit\_CA\_DC-Core) CR to TS 38.101-1: DL CA HPUE**

*Type: CR For: Agreement  
 38.101-1 v17.14.0 CR-2482 rev Cat: F (Rel-17)  
  
 Source: Qualcomm Inc.*

**Decision:** The document was **not treated**.

[**R4-2413139**](file:///D:\RAN4%23112\Docs\R4-2413139.zip) **(Power\_Limit\_CA\_DC-Core) CR to TS 38.101-1: DL CA HPUE**

*Type: CR For: Agreement  
 38.101-1 v18.6.0 CR-2483 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

MCC: This is CAT A CR.

**Decision:** The document was **not treated**.

## 11 New or revised WID/SID

[**R4-2411174**](file:///D:\RAN4%23112\Docs\R4-2411174.zip) **Motivation for MSD reporting enhancement in Rel-19**

*Type: other For: Information  
 Source: Apple*

**Abstract:**

MCC: This is motivation paper for new or revised WID/SID. This paper summarize the drawbacks of the Rel-18 lower MSD capability signaling and propose a more effective and efficient MSD/SIR measurement and reporting scheme based on real carrier configurations as part of Rel-19 RAN4 objectives for consideration.

**Decision:** The document was **not treated**.

[**R4-2411175**](file:///D:\RAN4%23112\Docs\R4-2411175.zip) **Motivation for UL Tx switching for FR1 intra-band non-contiguous UL CA in Rel-19**

*Type: other For: Information  
 Source: Apple*

**Abstract:**

MCC: This is motivation paper for new or revised WID/SID. This paper discusses how the feature UL Tx switching provides the benefits of coverage improvement, UL throughput enhancement, and latency reduction. Considering that the same feature can very well be applied to FR1 intra-band non-contiguous UL CA where UE is typically limited with two Tx paths for simultaneous transmission, Apple provide the motivation on introducing the UL Tx switching feature for FR1 intra-band non-contiguous UL CA as part of the Rel-19 RAN4 objectives.

**Decision:** The document was **not treated**.

[**R4-2411176**](file:///D:\RAN4%23112\Docs\R4-2411176.zip) **Motivation for a new work item on LB+LB CA based on switching in Rel-19**

*Type: other For: Information  
 Source: Apple, Skyworks Solutions Inc., BT plc, TELUS, Bell Mobility, Anterix, Southern Linc*

**Abstract:**

MCC: This is motivation paper for new or revised WID/SID. This paper discusses LB+LB CA based on switching in Rel-19 During the RAN #104 meeting an operator request for low band + low band (LB+LB) carrier aggregation based on switching. This contribution describes the relevant LB+LB CA scenarios and provides the motivation for a new Rel-19 work item to specify a switching solution to enable their adoption into practical handset front end architectures.

**Decision:** The document was **not treated**.

[**R4-2411268**](file:///D:\RAN4%23112\Docs\R4-2411268.zip) **Motivation for supporting irregular channels with the next larger channel bandwidth in Rel-19**

*Type: other For: Information  
 Source: Apple*

**Abstract:**

MCC: This is motivation paper for new or revised WID/SID. This paper discusses the support of irregular channels with the next larger channel bandwidth in Rel-19. In response to that limitation RAN4 contemplated so-called "next larger channel" solution, which allows a UE to use all RBs spanning the irregular spectrum block. This approach was not pursued in Rel-18 because companies preferred to focus on enhanced channel raster. Thus, in this discussion paper Apple present further considerations on benefits of the "next larger channel" and suggest considering the corresponding normative work in Rel-19.

**Decision:** The document was **not treated**.

[**R4-2411269**](file:///D:\RAN4%23112\Docs\R4-2411269.zip) **Motivation paper for band plan for satellite communication in terrestrial bands**

*Type: other For: Information  
 Source: Apple*

**Abstract:**

MCC: This is motivation paper for new or revised WID/SID. This paper present further details of the FCC R&O and outline next action points for 3GPP to analyze designated spectrum blocks and how they can be used in the final band plan.

**Decision:** The document was **not treated**.

[**R4-2411783**](file:///D:\RAN4%23112\Docs\R4-2411783.zip) **Evolution path of 3Tx UEs**

*Type: discussion For: Discussion  
 Source: MediaTek Inc., China Telecom, China Unicom, OPPO, Softbank, T-Mobile USA, Verizon*

**Abstract:**

MCC: This paper discusses the need in Rel-19 to consider the evolution path to further utilize the 3Tx architecture to achieve even better performance. In the newly approved Rel-19 WI NR\_ENDC\_RF\_Ph4, one objective for HPUE with CA was introduced to discuss the general requirements for 3Tx UE.

On spectrum-related WIs, according to the approved RP-240894, the 3Tx requirements will be distributed into multiple baskets, such as PC3: DC\_R19\_xBLTE\_yBNR/NR\_CADC\_SUL\_R19 for PC3 and HPUE\_DC\_LTE\_NR\_R19/HPUE\_NR\_CADC\_SUL\_R19 for HPUE.

**Decision:** The document was **not treated**.

[**R4-2412129**](file:///D:\RAN4%23112\Docs\R4-2412129.zip) **New WID Proposal: Introduction of HAPS additional operating bands**

*Type: WID new For: Information  
 Source: SoftBank Corp.*

**Abstract:**

This contribution proposes additional frequency bands for HAPS operation based on the results of the ITU's World Radio Communication Conference 2023(WRC-23.) As with the addition of the 2 GHz band as an operating band for HAPS, we will establish a WI and conduct a study to add bands. MCC: From November to December 2023, the ITU’s WRC-23 was held in Dubai, United Arab Emirates. At the conference, an official decision was reached to add and modify frequency bands which could be used for HAPS base stations. By making it possible for operators to select frequency bands with flexibility, it is expected that the introduction and development of HAPS-based mobile broadband communications will spread across various countries and regions.

**Decision:** The document was **not treated**.

[**R4-2412262**](file:///D:\RAN4%23112\Docs\R4-2412262.zip) **New WID on mmWave UE spurious emssion**

*Type: WID new For: Information  
 Source: China Unicom*

**Abstract:**

MCC: draft WID on mmWave spurious emission. This WID highlight that in order to facilitate the mmWave industry maturity, this WI is proposed to specify relevant requirements that meet the latest UE emission demand from regulation.

**Decision:** The document was **not treated**.

[**R4-2412462**](file:///D:\RAN4%23112\Docs\R4-2412462.zip) **Rel-19 AI Mobility – RAN4 Scope**

*Type: other For: Discussion  
 Source: Shanghai Chen Si Electronics*

**Decision:** The document was **not treated**.

[**R4-2412786**](file:///D:\RAN4%23112\Docs\R4-2412786.zip) **Motivation on introduction of new FR2 PC**

*Type: other For: Information  
 Source: Huawei,HiSilicon*

**Abstract:**

MCC: This is motivation paper for new or revised WID/SID. This paper discusses why FR2 PC acceleration will promote the spread of FR2 market in China as well as lead to the expansion of the FR2 industry development around the world, given that the proposed new FR2 power class with low complexity with clear targeted use cases will shorten the time to market of such FR2 devices, and thus help to speed up FR2 network deployment.

**Decision:** The document was **not treated**.

[**R4-2412787**](file:///D:\RAN4%23112\Docs\R4-2412787.zip) **Draft WID for introduction of new FR2 PC**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision:** The document was **not treated**.

[**R4-2412924**](file:///D:\RAN4%23112\Docs\R4-2412924.zip) **New WID proposal: Intra-SAN Carrier Aggregation (CA) for NR-NTN**

*Type: WID new For: Information  
 Source: Inmarsat, Viasat*

**Abstract:**

MCC: This was not submitted by tdoc submission deadline.

**Decision:** The document was **not treated**.

[**R4-2413125**](file:///D:\RAN4%23112\Docs\R4-2413125.zip) **New SID on VSAT test methods**

*Type: SID new For: Information  
 Source: Eutelsat Group*

**Abstract:**

MCC: This is a draft SID on VSAT test methods. This SID states that the next phase of the work is to consider performance requirements and then testability. Current test methods defined for TN FR2 UE and BS may not be suitable for testing VSAT for two reasons: 1. VSAT device sizes are much larger than FR2 UE handsets; 2. The lower frequency range of VSAT is 10.7 GHz, well below the current TN FR2 frequency range.

**Decision:** The document was **not treated**.

[**R4-2413228**](file:///D:\RAN4%23112\Docs\R4-2413228.zip) **Revised WID on Introduction of an IoT-NTN S-band for North America (MSS band 2000-2020 MHz UL and 2180-2200 MHz DL)**

*Type: WID revised For: Endorsement  
 Source: Mediatek India Technology Pvt.*

**Decision:** The document was **not treated**.

## 12 Any other business

## 13 Close of the meeting

[**R4-2411299**](file:///D:\RAN4%23112\Docs\R4-2411299.zip) **Rel-19 draft new SID: Study on spatial channel model for demodulation performance requirements**

*Type: SID new For: Information  
 Source: Nokia, BT plc*

**Decision:** The document was **withdrawn**.

The RAN4 Chair Xizeng Dai (Huawei) formally closed the RAN4#112 meeting on Friday, 23/08/2024 at 16h30.

Report prepared by: MCC

BACKUP

-------------------------- Constant values for Chair Tool, please keep them in your notes ----------------------------

**R****4-24AAACR Draft big CR for**

*Type: draftCR For: Endorsement  
 38.1xx-0y v18.x.0 CR- rev Cat: B (Rel-1x)  
  
 Source:*

**Decision: Return to.**

**R4-24AAASU Topic summary for [112][10x] x**

*Type: other For: Information  
 Source: Moderator ()*

**Abstract:**

This contribution provides the summary of topics and recommended summary.

**Decision: Return to.**

**R****4-24AAAWF WF on**

*Type: other For: Approval  
 Source:*

**Decision: Return to.**

**R4-24AAATP TP for TR 38.xxx**

*Type: pCR For: Approval  
 38.xxx-0y-0y vx.y.z CR- rev Cat: (Rel-18)  
  
 Source:*

**Decision: Return to.**

**LatestTdocNumber: R4-2414279**

-------------------------- Constant values for Chair Tool, please keep them in your notes ----------------------------

-------------------------- Update the Tdoc status by a batch processing ----------------------------

**Update\_Tdoc\_Status\_By\_Batch:**

[R4-2405003](file:///D:\RAN4%23112\Docs\R4-2405003.zip) agreed

[R4-2415024](file:///D:\RAN4%23112\Docs\R4-2415024.zip) ENDprocessing

-------------------------- Update the Tdoc status by a batch processing ----------------------------