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

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

**Electronic Meeting, Online, 25/05/2020 to 05/06/2020**

Report generated on Monday, 2020-05-18 21:15 UTC

Contents:

1 Opening of the E-meeting 10

2 Approval of the agenda 11

3 Letters / reports from other groups / meetings 11

4 Rel15 New radio access technology 16

4.1 NE-DC, NGEN-DC, and NR-NR DC Maintenance [NR\_newRAT-Core] 16

4.2 System Parameters Maintenance [NR\_newRAT-Core] 17

4.3 SUL and LTE-NR co-existence maintenance [NR\_newRAT-Core] 25

4.4 UE RF requirements maintenance [NR\_newRAT] 25

4.4.1 DC combination including NR carrier and/or NR CA combination maintenance [NR\_newRAT-Core] 25

4.4.1.1 Maintenance for bands and band combinations in 38.101-1 [NR\_newRAT-Core] 25

4.4.1.2 Maintenance for bands and band combinations in 38.101-2 [NR\_newRAT-Core] 27

4.4.1.3 Maintenance for combinations in 38.101-3 [NR\_newRAT-Core] 28

4.4.2 [FR1] Maintenance for general requirements in 38.101-1 [NR\_newRAT-Core] 31

4.4.2.1 Power class related to UL MIMO and other related req. (MPR, SEM, etc) [NR\_newRAT-Core] 33

4.4.2.2 Other Tx requirements [NR\_newRAT-Core] 39

4.4.2.3 Maintenance for Receiver characteristics [NR\_newRAT-Core] 43

4.4.3 [FR2] Maintenance for general requirements in 38.101-2 [NR\_newRAT-Core] 47

4.4.3.1 Regulatory Tx/Rx spurious emission limits handling [NR\_newRAT-Core] 47

4.4.3.2 Maintenance for Transmitter characteristics [NR\_newRAT-Core] 50

4.4.3.3 Maintenance for Receiver characteristics [NR\_newRAT-Core] 56

4.4.4 Maintenance for general requirements in 38.101-3 [NR\_newRAT-Core] 57

4.4.4.1 [FR1] Maintenance for Transmitter characteristics within FR1 [NR\_newRAT-Core] 59

4.4.4.2 [FR1+FR2] Maintenance for Transmitter characteristics involving both FR1 and FR2 [NR\_newRAT-Core] 61

4.4.4.3 [FR1] Maintenance for Receiver characteristics within FR1 [NR\_newRAT-Core] 61

4.4.4.4 [FR1+FR2] Maintenance for Receiver characteristics involving both FR1 and FR2 [NR\_newRAT-Core] 63

4.4.5 Editorial CRs [NR\_newRAT-Core] 63

4.5 UE EMC [NR\_newRAT-Core] 66

4.6 BS RF [NR\_newRAT-Core] 72

4.6.1 General [NR\_newRAT-Core] 72

4.6.2 Editorial CRs [NR\_newRAT-Core] 75

4.6.3 Transmitter characteristics maintenance [NR\_newRAT-Core] 75

4.6.4 Receiver characteristics maintenance [NR\_newRAT-Core] 83

4.7 BS conformance testing [NR\_newRAT-Perf] 84

4.7.1 General [NR\_newRAT-Perf] 84

4.7.2 Editorial CRs [NR\_newRAT-Perf/Core] 85

4.7.3 BS specifications clean-ups (including conformance testing and core) [NR\_newRAT-Perf/Core] 85

4.7.3.1 eAAS specifications [NR\_newRAT-Perf/Core] 85

4.7.3.2 MSR specifications [NR\_newRAT-Perf/Core] 90

4.7.3.3 NR conformance testing specifications [NR\_newRAT-Perf] 92

4.7.4 Conducted conformance testing (38.141-1) [NR\_newRAT-Perf] 100

4.7.5 Radiated conformance testing (38.141-2) [NR\_newRAT-Perf] 101

4.8 BS EMC [NR\_newRAT-Core] 103

4.8.1 Editorial CRs [NR\_newRAT-Perf/Core] 103

4.8.2 Core requirements [NR\_newRAT-Core] 103

4.8.2.1 Emission requirements [NR\_newRAT-Core] 103

4.8.2.2 Immunity requirements [NR\_newRAT-Core] 104

4.8.3 Performance requirements [NR\_newRAT-Perf] 104

4.9 RRM core maintenance (38.133/36.133) [NR\_newRAT-Core] 105

4.9.1 General [NR\_newRAT-Core] 105

4.9.2 Editorial CRs [NR\_newRAT-Core] 105

4.9.3 UE measurement capability (38.133/36.133) [NR\_newRAT-Core] 107

4.9.4 RRM measurement and measurement gap (38.133/36.133) [NR\_newRAT-Core] 111

4.9.5 Connected state mobility (38.133/36.133) [NR\_newRAT-Core] 112

4.9.6 Timing (38.133/36.133) [NR\_newRAT-Core] 114

4.9.7 Signaling characteristics (38.133/36.133) [NR\_newRAT-Core] 114

4.9.8 Beam management based on SSB and/or CSI-RS (38.133) [NR\_newRAT-Core] 123

4.9.9 Other requirements [NR\_newRAT-Core] 126

4.10 RRM perf maintenance (38.133/36.133) [NR\_newRAT-Perf] 126

4.10.1 General [NR\_newRAT-Perf] 126

4.10.2 Editorial CRs [NR\_newRAT-Perf] 128

4.10.3 RRM test cases [NR\_newRAT-Perf] 128

4.11 Demodulation and CSI maintenance [NR\_newRAT-Perf] 147

4.11.1 Editorial CRs [NR\_newRAT-Perf] 147

4.11.2 UE demodulation and CSI (38.101-4) [NR\_newRAT-Perf] 148

4.11.3 BS demodulation (38.104) [NR\_newRAT-Perf] 151

4.12 Maintenance of the Positioning specs (36.171, 37.171 and 38.171) [NR\_newRAT-Perf or TEI] 154

4.13 Testability Maintenance (38.810) [FS\_NR\_test\_methods] 154

5 Rel-16 Work Items for LTE 155

5.1 LTE intra-band Carrier Aggregation for x CC DL/y CC UL including contiguous and non-contiguous spectrum (x>=y) [LTE\_CA\_R16\_intra] 155

5.1.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_intra-Core/Perf] 155

5.1.2 UE RF [LTE\_CA\_R16\_intra-Core] 156

5.2 LTE inter-band Carrier Aggregation for 2 bands DL with 1 band UL [LTE\_CA\_R16\_2BDL\_1BUL] 157

5.2.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_2BDL\_1BUL-Core/Perf] 157

5.2.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R16\_2BDL\_1BUL-Core] 158

5.2.3 UE RF without specific issues [LTE\_CA\_R16\_2BDL\_1BUL-Core] 158

5.3 LTE inter-band Carrier Aggregation for 3 bands DL with 1 band UL [LTE\_CA\_R16\_3BDL\_1BUL] 158

5.3.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_3BDL\_1BUL-Core/Perf] 158

5.3.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R16\_3BDL\_1BUL-Core] 158

5.3.3 UE RF without specific issues [LTE\_CA\_R16\_3BDL\_1BUL-Core] 158

5.4 LTE inter-band Carrier Aggregation for x bands DL (x=4, 5) with 1 band UL [LTE\_CA\_R16\_xBDL\_1BUL] 159

5.4.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_xBDL\_1BUL-Core] 159

5.4.2 UE RF with 4 LTE bands CA [LTE\_CA\_R16\_xBDL\_1BUL-Core] 159

5.4.3 UE RF with 5 LTE bands CA [LTE\_CA\_R16\_xBDL\_1BUL-Core] 159

5.5 LTE inter-band Carrier Aggregation for 2 bands DL with 2 band UL [LTE\_CA\_R16\_2BDL\_2BUL] 159

5.5.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_2BDL\_2BUL-Core] 159

5.5.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R16\_2BDL\_2BUL-Core] 160

5.5.3 UE RF without specific issues [LTE\_CA\_R16\_2BDL\_2BUL-Core] 160

5.6 LTE inter-band Carrier Aggregation for x bands DL (x= 3, 4, 5) with 2 band UL [LTE\_CA\_R16\_xBDL\_2BUL] 161

5.6.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_xBDL\_2BUL-Core] 161

5.6.2 UE RF with MSD [LTE\_CA\_R16\_xBDL\_2BUL-Core] 161

5.6.3 UE RF without MSD [LTE\_CA\_R16\_xBDL\_2BUL-Core] 162

5.7 RRM for LTE CA basket WI-s [LTE\_CA\_R16\_xxxx] 163

5.7.1 RRM Core (36.133) [LTE\_CA\_R16\_xxxx-Core] 163

5.7.2 RRM Perf (36.133) [LTE\_CA\_R16\_xxxx-Perf] 163

5.8 Additional LTE bands for UE category M1 and/or NB1 in Rel-16 [LTE\_bands\_R16\_M1\_NB1] 163

5.8.1 RF [LTE\_bands\_R16\_M1\_NB1-Core] 163

5.8.2 Others [LTE\_bands\_R16\_M1\_NB1-Perf] 163

5.9 Additional LTE bands for UE category M2 and/or NB2 in in Rel-16 [LTE\_bands\_R16\_M2\_NB2] 164

5.9.1 RF [LTE\_bands\_R16\_M2\_NB2-Core] 164

5.9.2 Others [LTE\_bands\_R15\_M2\_NB2-Perf] 164

5.10 Additional MTC enhancements for LTE [LTE\_eMTC5] 164

5.10.1 General [LTE\_eMTC5] 164

5.10.2 Coexistence with NR [LTE\_eMTC5] 164

5.10.3 RRM core requirements (36.133) [LTE\_eMTC5-Core] 165

5.10.3.1 DL quality report in MSG3 and connected mode [LTE\_eMTC5-Core] 165

5.10.3.2 WUS [LTE\_eMTC5-Core] 166

5.10.3.3 MPDCCH performance improvement [LTE\_eMTC5-Core] 166

5.10.3.4 PUR [LTE\_eMTC5-Core] 166

5.10.3.5 Mobility enhancement [LTE\_eMTC5-Core] 168

5.10.3.6 Others [LTE\_eMTC5-Core] 170

5.10.4 Demodulation and CSI requirements (36.101/36.104) [LTE\_eMTC5-Perf] 170

5.11 Additional enhancements for NB-IoT [NB\_IOTenh3] 172

5.11.1 General [NB\_IOTenh3] 172

5.11.2 Coexistence with NR [NB\_IOTenh3] 172

5.11.3 RRM core requirements (36.133) [NB\_IOTenh3-Core] 173

5.11.3.1 Group WUS [NB\_IOTenh3-Core] 173

5.11.3.2 PUR [NB\_IOTenh3-Core] 173

5.11.3.3 Multi-carrier operations [NB\_IOTenh3-Core] 174

5.11.3.4 Others [NB\_IOTenh3-Core] 176

5.11.4 Demodulation and CSI requirements (36.101/36.104) [NB\_IOTenh3-Perf] 177

5.12 Even further Mobility enhancement in E-UTRAN [LTE\_feMob] 178

5.12.1 RRM core requirements (36.133) [LTE\_feMob-Core] 178

5.12.1.1 Conditional handover [LTE\_feMob-Core] 178

5.12.1.2 Reduction of user data interruption [LTE\_feMob-Core] 178

5.12.1.3 Others [LTE\_feMob-Core] 179

5.13 LTE-based 5G terrestrial broadcast [LTE\_terr\_bcast] 179

5.13.1 Demodulation and CSI requirements (36.101) [LTE\_terr\_bcast -Perf] 179

5.13.2 Others [LTE\_terr\_bcast -Core/Perf] 181

5.14 R16 LTE maintenance [WI code] 182

5.14.1 RF [WI code] 182

5.14.2 RRM [WI code] 183

5.14.3 Demodulation and CSI requirements [WI code] 183

6 Rel-16 non-spectrum related work items for NR 184

6.1 NR-based access to unlicensed spectrum [NR\_unlic] 184

6.1.1 System Parameters [NR\_unlic-Core] 184

6.1.2 UE RF requirements [NR\_unlic-Core] 186

6.1.2.1 Transmitter characteristics [NR\_unlic-Core] 187

6.1.2.2 Receiver characteristics [NR\_unlic-Core] 189

6.1.3 Band combination related (Analysis, TPs, etc.) [NR\_unlic-Core] 190

6.1.4 BS RF requirements [NR\_unlic-Core] 191

6.1.4.1 Transmitter characteristics [NR\_unlic-Core] 193

6.1.4.2 Receiver characteristics [NR\_unlic-Core] 194

6.1.5 RRM core requirements (38.133) [NR\_unlic-Core] 195

6.1.5.1 General (specification structure, etc) [NR\_unlic-Core] 195

6.1.5.2 Cell re-selection [NR\_unlic-Core] 196

6.1.5.3 Handover [NR\_unlic-Core] 198

6.1.5.4 RRC connection mobility control [NR\_unlic-Core] 200

6.1.5.5 SCell activation/deactivation (delay and interruption) [NR\_unlic-Core] 202

6.1.5.6 PSCell addition/release (delay and interruption) [NR\_unlic-Core] 202

6.1.5.7 Active TCI state switching [NR\_unlic-Core] 203

6.1.5.8 Interruptions due to operation in non-NR-U serving cells [NR\_unlic-Core] 204

6.1.5.9 Active BWP switching [NR\_unlic-Core] 204

6.1.5.10 RLM and link recovery procedures [NR\_unlic-Core] 206

6.1.5.11 Measurement requirements [NR\_unlic-Core] 209

6.1.5.12 Measurement capability and reporting criteria [NR\_unlic-Core] 215

6.1.5.13 Timing [NR\_unlic-Core] 216

6.1.5.14 Others [NR\_unlic-Core] 218

6.2 Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR [NR\_CLI\_RIM] 218

6.2.1 General [NR\_CLI\_RIM-Core] 218

6.2.2 RRM core requirements maintenance (38.133) [NR\_CLI\_RIM-Core] 218

6.2.3 RRM perf. requirements (38.133) [NR\_CLI\_RIM-Perf] 219

6.2.3.1 CLI measurement accuracy [NR\_CLI\_RIM-Perf] 219

6.2.3.2 Test cases [NR\_CLI\_RIM-Perf] 219

6.2.3.3 Others [NR\_CLI\_RIM-Perf] 221

6.3 NR mobility enhancement [NR\_Mob\_enh] 221

6.3.1 General [NR\_Mob\_enh-Core] 221

6.3.2 RRM core requirements (38.133) [NR\_Mob\_enh-Core] 221

6.3.2.1 Handover with simultaneous Rx/Tx with source and target cells [NR\_Mob\_enh-Core] 221

6.3.2.2 Conditional handover [NR\_Mob\_enh-Core] 223

6.3.2.3 Conditional PSCell addition/change [NR\_Mob\_enh-Core] 224

6.3.2.4 Others [NR\_Mob\_enh-Core] 224

6.4 5G V2X with NR sidelink [5G\_V2X\_NRSL] 224

6.4.1 General [5G\_V2X\_NRSL] 224

6.4.2 System parameters [5G\_V2X\_NRSL-Core] 225

6.4.3 UE RF requirements [5G\_V2X\_NRSL-Core] 227

6.4.3.1 Transmitter characteristics [5G\_V2X\_NRSL-Core] 227

6.4.3.2 Receiver characteristics [5G\_V2X\_NRSL-Core] 230

6.4.4 Concurrent operation (scenarios, requirements, etc) [5G\_V2X\_NRSL-Core] 232

6.4.5 RRM core requirements (38.133) [5G\_V2X\_NRSL-Core] 233

6.4.5.1 Transmit timing requirements [5G\_V2X\_NRSL-Core] 233

6.4.5.2 Synchronization requirements [5G\_V2X\_NRSL-Core] 233

6.4.5.3 Measurement requirements [5G\_V2X\_NRSL-Core] 234

6.4.5.4 Interruption requirements [5G\_V2X\_NRSL-Core] 235

6.4.5.5 Others [5G\_V2X\_NRSL-Core] 237

6.5 Integrated Access and Backhaul for NR [NR\_IAB] 238

6.5.1 General [NR\_IAB-Core] 238

6.5.1.1 System parameters [NR\_IAB-Core] 238

6.5.1.2 IAB-MT class [NR\_IAB-Core] 238

6.5.1.3 IAB-MT feature list [NR\_IAB-Core] 239

6.5.1.4 Others [NR\_IAB-Core] 241

6.5.2 RF requirements [NR\_IAB-Core] 241

6.5.2.1 Conductive RF core requirements [NR\_IAB-Core] 241

6.5.2.1.1 Transmitter characteristics [NR\_IAB-Core] 241

6.5.2.1.2 Receiver characteristics [NR\_IAB-Core] 243

6.5.2.1.3 TP to TS/TR [NR\_IAB-Core] 243

6.5.2.2 Radiated RF core requirements [NR\_IAB-Core] 246

6.5.2.2.1 Transmitter characteristics [NR\_IAB-Core] 246

6.5.2.2.2 Receiver characteristics [NR\_IAB-Core] 249

6.5.2.2.3 TP to TS/TR [NR\_IAB-Core] 250

6.5.3 RRM core requirements (38.133) [NR\_IAB-Core] 253

6.5.3.1 General [NR\_IAB-Core] 253

6.5.3.2 RRC connection mobility control [NR\_IAB-Core] 254

6.5.3.3 MT timing related requirements [NR\_IAB-Core] 255

6.5.3.4 RLM requirements [NR\_IAB-Core] 256

6.5.3.5 BFR requirements [NR\_IAB-Core] 257

6.5.4 EMC core requirements [NR\_IAB-Core] 258

6.6 Multi-RAT Dual-Connectivity and Carrier Aggregation enhancements [LTE\_NR\_DC\_CA\_enh] 260

6.6.1 General [LTE\_NR\_DC\_CA\_enh-Core] 260

6.6.2 RF requirements [LTE\_NR\_DC\_CA\_enh-Core] 261

6.6.3 RRM core requirements (38.133) [LTE\_NR\_DC\_CA\_enh-Core] 265

6.6.3.1 Early Measurement reporting [LTE\_NR\_DC\_CA\_enh-Core] 265

6.6.3.1.1 NR measurements for EMR [LTE\_NR\_DC\_CA\_enh-Core] 265

6.6.3.1.2 LTE NR Inter-RAT EMR [LTE\_NR\_DC\_CA\_enh-Core] 266

6.6.3.2 Efficient and low latency serving cell configuration, activation and setup [LTE\_NR\_DC\_CA\_enh-Core] 268

6.6.3.2.1 Direct SCell activation [LTE\_NR\_DC\_CA\_enh-Core] 268

6.6.3.2.2 SCell dormancy [LTE\_NR\_DC\_CA\_enh-Core] 270

6.6.3.3 Others [LTE\_NR\_DC\_CA\_enh-Core] 273

6.7 UE power saving in NR [NR\_UE\_pow\_sav] 273

6.7.1 General [NR\_UE\_pow\_sav] 273

6.7.2 RRM core requirements (38.133) [NR\_UE\_pow\_sav-Core] 273

6.7.2.1 RRM measurement relaxation [NR\_UE\_pow\_sav-Core] 273

6.7.3 Demodulation and CSI requirements (38.101-4) [NR\_UE\_pow\_sav-Perf 277

6.8 NR Positioning Support [NR\_pos] 279

6.8.1 General [NR\_pos-Core/Perf] 279

6.8.2 RRM core requirements (38.133) [NR\_pos-Core] 280

6.8.2.1 UE requirements [NR\_pos-Core] 280

6.8.2.1.1 PRS-RSTD measurements [NR\_pos-Core] 281

6.8.2.1.2 PRS-RSRP measurements [NR\_pos-Core] 284

6.8.2.1.3 Rx-Tx time difference measurements [NR\_pos-Core] 287

6.8.2.1.4 SSB and CSI-RS RSRP/RSRQ measurements [NR\_pos-Core] 290

6.8.2.1.5 Link-level evaluations for PRS-RSTD and PRS-RSRP [NR\_pos-Core] 290

6.8.2.2 Impact on existing RRM requirements [NR\_pos-Core] 291

6.8.2.3 gNB requirements [NR\_pos-Core] 293

6.8.2.4 Others [NR\_pos-Core] 297

6.9 Physical layer enhancements for NR URLLC [NR\_L1enh\_URLLC-Core] 298

6.9.1 Demodulation and CSI requirements [NR\_L1enh\_URLLC-Perf] 298

6.9.1.1 Performance requirements with ultra-low BLER [NR\_L1enh\_URLLC-Perf] 298

6.9.1.1.1 UE demodulation and CSI requirements (38.101-4) [NR\_L1enh\_URLLC-Perf] 299

6.9.1.1.2 BS demodulation requirements (38.104) [NR\_L1enh\_URLLC-Perf] 300

6.9.1.2 Performance requirements with higher BLER [NR\_L1enh\_URLLC-Perf] 301

6.9.1.2.1 UE demodulation and CSI requirements (38.101-4) [NR\_L1enh\_URLLC-Perf] 301

6.9.1.2.2 BS demodulation requirements (38.104) [NR\_L1enh\_URLLC-Perf] 304

6.10 Single radio voice call continuity from 5G to 3G (SRVCC) [SRVCC\_NR\_to\_UMTS-Core] 306

6.10.1 RRM core requirements maintenance (38.133) [SRVCC\_NR\_to\_UMTS-Core] 306

6.10.2 RRM perf requirements (38.133) [SRVCC\_NR\_to\_UMTS-Perf] 306

6.11 Enhancements on MIMO for NR [NR\_eMIMO] 307

6.11.1 UE RF core requirements (38.101) [NR\_eMIMO-Core] 307

6.11.1.1 DMRS enhancement with PI/2 BPSK [NR\_eMIMO-Core] 307

6.11.1.2 Uplink Tx Full Power transmission [NR\_eMIMO-Core] 308

6.11.2 RRM core requirements (38.133) [NR\_eMIMO-Core] 311

6.11.2.1 L1-SINR [NR\_eMIMO-Core] 311

6.11.2.2 SCell Beam failure recovery [NR\_eMIMO-Core] 313

6.11.2.3 DL/UL beam indication with reduced latency and overhead [NR\_eMIMO-Core] 315

6.11.2.4 Others [NR\_eMIMO-Core] 315

6.11.3 Demodulation and CSI requirements (38.101-4) [NR\_eMIMO-Perf] 318

6.11.3.1 General [NR\_eMIMO-Perf] 318

6.11.3.2 Demodulation requirements [NR\_eMIMO-Perf] 318

6.11.3.3 CSI requirements [NR\_eMIMO-Perf] 320

6.12 Add support of NR DL 256QAM for FR2 [NR\_DL256QAM\_FR2] 321

6.12.1 General [NR\_DL256QAM\_FR2] 321

6.12.2 BS RF core requirements (38.104) [NR\_DL256QAM\_FR2] 321

6.12.3 UE RF core requirements (38.101-2) [NR\_DL256QAM\_FR2] 322

6.12.4 Demodulation and CSI requirements (38.101-4) [NR\_DL256QAM\_FR2-Perf] 322

6.13 RF requirements for NR frequency range 1 (FR1) [NR\_RF\_FR1] 324

6.13.1 RF core requirements [NR\_RF\_FR1] 324

6.13.1.1 Almost contiguous allocations for CP-OFDM UL for FR1 [NR\_RF\_FR1] 324

6.13.1.2 Intra-band contiguous DL CA for FR1 [NR\_RF\_FR1] 324

6.13.1.3 Intra-band contiguous UL CA for FR1 power class 3 [NR\_RF\_FR1] 325

6.13.1.4 Intra-band non-contiguous UL CA for FR1 power class 3 [NR\_RF\_FR1] 327

6.13.1.5 Switching period between case 1 and case 2 [NR\_RF\_FR1] 328

6.13.1.6 Transient period capability [NR\_RF\_FR1] 331

6.13.1.7 Time masks for ULSUP-TDM in case of UL timing misalignment [NR\_RF\_FR1] 332

6.13.2 RRM core requirements (38.133) [NR\_RF\_FR1] 332

6.13.2.1 RRM requirements for Tx switching between two uplink carriers [NR\_RF\_FR1] 332

6.14 NR RF requirement enhancements for frequency range 2 (FR2) [NR\_RF\_FR2\_req\_enh] 334

6.14.1 RF core requirements [NR\_RF\_FR2\_req\_enh] 334

6.14.1.1 FR2 MPE [NR\_RF\_FR2\_req\_enh] 334

6.14.1.2 Beam Correspondence based on configured DL RS (SSB or CSI-RS) [NR\_RF\_FR2\_req\_enh] 337

6.14.1.3 Intra-band non-cont DL CA for aggregated BW larger than 1400 MHz [NR\_RF\_FR2\_req\_enh] 340

6.14.1.4 Intra-band non-contiguous UL CA [NR\_RF\_FR2\_req\_enh] 341

6.14.1.5 Inter-band DL CA [NR\_RF\_FR2\_req\_enh] 342

6.14.1.6 Improvement of UE MPR [NR\_RF\_FR2\_req\_enh] 345

6.14.1.7 Improvement of spherical coverage requirements for PC3 [NR\_RF\_FR2\_req\_enh] 346

6.14.1.8 Multiband relaxation framework enhancement [NR\_RF\_FR2\_req\_enh] 346

6.14.1.9 FR2 Beam Squint [NR\_RF\_FR2\_req\_enh] 348

6.14.2 RRM core requirements (38.133) [NR\_RF\_FR2\_req\_enh] 349

6.14.2.1 Inter-band DL CA MRTD [NR\_RF\_FR2\_req\_enh] 349

6.15 NR RRM requirement enhancement [NR\_RRM\_Enh\_Core] 352

6.15.1 RRM core requirements (38.133) [NR\_RRM\_Enh\_Core] 352

6.15.1.1 SRS carrier switching requirements [NR\_RRM\_Enh\_Core] 352

6.15.1.2 Multiple Scell activation/deactivation [NR\_RRM\_Enh\_Core] 354

6.15.1.3 CGI reading requirements with autonomous gap [NR\_RRM\_Enh\_Core] 357

6.15.1.4 BWP switching on multiple CCs [NR\_RRM\_Enh\_Core] 361

6.15.1.5 Inter-frequency measurement requirement without MG [NR\_RRM\_Enh\_Core] 364

6.15.1.6 Mandatory MG patterns [NR\_RRM\_Enh\_Core] 366

6.15.1.7 UE-specific CBW change [NR\_RRM\_Enh\_Core] 368

6.15.1.8 Spatial relation switch for uplink [NR\_RRM\_Enh\_Core] 369

6.15.1.9 Non-simultaneous UL carrier operation in FR2 [NR\_RRM\_Enh\_Core] 371

6.15.1.10 Inter-band CA requirement for FR2 UE measurement capability of independent Rx beam and/or common beam [NR\_RRM\_Enh\_Core] 371

6.16 NR RRM requirements for CSI-RS based L3 measurement [NR\_CSIRS\_L3meas] 373

6.16.1 RRM core requirements (38.133) [NR\_CSIRS\_L3meas-Core] 373

6.16.1.1 CSI-RS measurement bandwidth [NR\_CSIRS\_L3meas-Core] 373

6.16.1.2 CSI-RS based intra-frequency and inter-frequency measurements definition [NR\_CSIRS\_L3meas-Core] 374

6.16.1.3 Measurement capability [NR\_CSIRS\_L3meas-Core] 377

6.16.1.4 Intra-frequency and inter-frequency measurement requirements [NR\_CSIRS\_L3meas-Core] 381

6.16.1.5 Others [NR\_CSIRS\_L3meas-Core] 384

6.17 NR support for high speed train scenario [NR\_HST] 385

6.17.1 RRM core requirements (38.133) [NR\_HST-Core] 385

6.17.1.1 Cell re-selection [NR\_HST-Core] 386

6.17.1.2 Cell identification delay [NR\_HST-Core] 387

6.17.1.3 RLM [NR\_HST-Core] 388

6.17.1.4 Beam management [NR\_HST-Core] 388

6.17.1.5 Inter-RAT measurement [NR\_HST-Core] 388

6.17.2 Demodulation and CSI requirements (38.101-4 / 38.104) [NR\_HST-Perf] 390

6.17.2.1 UE demodulation and CSI requirements (38.101-4) [NR\_HST-Perf] 390

6.17.2.1.1 Scenarios and transmission schemes [NR\_HST-Perf] 392

6.17.2.1.2 Requirements for HST-SFN [NR\_HST-Perf] 393

6.17.2.1.3 Requirements for HST single tap [NR\_HST-Perf] 393

6.17.2.1.4 Requirements for multi-path fading channels [NR\_HST-Perf] 394

6.17.2.1.5 Network assistance and UE capability signalling [NR\_HST-Perf] 395

6.17.2.2 BS demodulation requirements (38.104) [NR\_HST-Perf] 395

6.17.2.2.1 PUSCH requirements [NR\_HST-Perf] 396

6.17.2.2.2 PRACH requirements [NR\_HST-Perf] 401

6.17.2.2.3 UL timing adjustment requirements [NR\_HST-Perf] 403

6.18 NR performance requirement enhancement [NR\_perf\_enh-Perf] 405

6.18.1 UE demodulation and CSI requirements (38.101-4) [NR\_perf\_enh-Perf] 406

6.18.1.1 NR CA PDSCH requirements [NR\_perf\_enh-Perf] 406

6.18.1.2 PMI reporting requirements with larger number of Tx ports [NR\_perf\_enh-Perf] 408

6.18.1.3 LTE-NR co-existence for TDD [NR\_perf\_enh-Perf] 411

6.18.1.4 FR1 CA and EN-DC power imbalance requirements [NR\_perf\_enh-Perf] 411

6.18.1.5 NR CA CQI reporting requirements [NR\_perf\_enh-Perf] 413

6.18.2 BS demodulation requirements (38.104) [NR\_perf\_enh-Perf] 413

6.18.2.1 30% TP test point [NR\_perf\_enh-Perf] 413

6.18.2.2 Additional FR2 requirements [NR\_perf\_enh-Perf] 415

6.19 Over the air (OTA) base station (BS) testing TR [OTA\_BS\_testing-Perf] 415

6.19.1 General [OTA\_BS\_testing-Perf] 415

6.19.2 OTA calibration and test method procedures [OTA\_BS\_testing-Perf] 416

6.19.3 Coordinate system [OTA\_BS\_testing-Perf] 416

6.19.4 Conformance testing aspects [OTA\_BS\_testing-Perf] 416

6.19.5 MU / TT values: derivation and tables [OTA\_BS\_testing-Perf] 416

6.19.6 Annexes [OTA\_BS\_testing-Perf] 418

6.19.7 Others [OTA\_BS\_testing-Perf] 418

6.20 2-step RACH for NR [NR\_2step\_RACH-Perf] 421

6.20.1 RRM core requirements (38.133) [NR\_2step\_RACH-Core] 421

6.20.2 BS Demodulation requirements (38.104/38.141-1/38.141-2) [NR\_2step\_RACH-Perf] 423

6.20.3 Others [NR\_2step\_RACH-Perf] 425

6.21 R16 NR maintenance [WI code or TEI16] 425

6.21.1 BS RF [WI code or TEI16] 425

6.21.2 UE RF [WI code or TEI16] 425

6.21.3 RRM [WI code or TEI16] 429

6.21.4 Demodulation and CSI [WI code or TEI16] 430

7 UE feature list 430

8 Rel-16 spectrum related Work Items for NR 431

8.1 NR intra band Carrier Aggregation for xCC DL/yCC UL including contiguous and non-contiguous spectrum (x>=y) [NR\_CA\_R16\_intra] 431

8.1.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R16\_intra-Core /Perf] 431

8.1.2 UE RF for FR1 [NR\_CA\_R16\_intra-Core] 433

8.1.3 UE RF for FR2 [NR\_CA\_R16\_intra-Core] 434

8.2 NR inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1, 2) [NR\_CADC\_R16\_2BDL\_xBUL] 435

8.2.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R16\_2BDL\_xBUL-Core/Perf] 435

8.2.2 NR inter band CA without any FR2 band(s) [NR\_CADC\_R16\_2BDL\_xBUL-Core] 436

8.2.3 NR inter band CA with at least one FR2 band [NR\_CADC\_R16\_2BDL\_xBUL-Core] 440

8.3 EN-DC of 1 LTE band and 1 NR band [DC\_R16\_1BLTE\_1BNR\_2DL2UL] 441

8.3.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_1BLTE\_1BNR\_2DL2UL-Core/Perf] 441

8.3.2 EN-DC without FR2 band [DC\_R16\_1BLTE\_1BNR\_2DL2UL-Core] 442

8.3.3 EN-DC with FR2 band [DC\_R16\_1BLTE\_1BNR\_2DL2UL-Core] 445

8.4 EN-DC of 2 LTE band and 1 NR band [DC\_R16\_2BLTE\_1BNR\_3DL2UL] 445

8.4.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_2BLTE\_1BNR\_3DL2UL-Core/Perf] 445

8.4.2 EN-DC without FR2 band [DC\_R16\_2BLTE\_1BNR\_3DL2UL-Core] 446

8.4.3 EN-DC with FR2 band [DC\_R16\_2BLTE\_1BNR\_3DL2UL-Core] 450

8.5 EN-DC of 3 LTE band and 1 NR band [DC\_R16\_3BLTE\_1BNR\_4DL2UL] 451

8.5.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_3BLTE\_1BNR\_4DL2UL-Core/Perf] 451

8.5.2 EN-DC without FR2 band [DC\_R16\_3BLTE\_1BNR\_4DL2UL-Core] 452

8.5.3 EN-DC with FR2 band [DC\_R16\_3BLTE\_1BNR\_4DL2UL-Core] 459

8.6 EN-DC of 4 LTE band and 1 NR band [DC\_R16\_4BLTE\_1BNR\_5DL2UL] 459

8.6.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_4BLTE\_1BNR\_5DL2UL-Core/Perf] 459

8.6.2 EN-DC without FR2 band [DC\_R16\_4BLTE\_1BNR\_5DL2UL-Core] 460

8.6.3 EN-DC with FR2 band [DC\_R16\_4BLTE\_1BNR\_5DL2UL-Core] 461

8.7 EN-DC of x bands (x=1,2, 3, 4) LTE inter-band CA and 2 bands NR inter-band CA [DC\_R16\_xBLTE\_2BNR\_yDL2UL] 461

8.7.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_xBLTE\_2BNR\_yDL2UL-Core/Per] 461

8.7.2 EN-DC including NR inter CA without FR2 band [DC\_R16\_xBLTE\_2BNR\_yDL2UL-Core] 461

8.7.3 EN-DC including NR inter CA with FR2 band [DC\_R16\_xBLTE\_2BNR\_yDL2UL-Core] 468

8.8 Band combinations for SA NR supplementary uplink (SUL), NSA NR SUL, NSA NR SUL with UL sharing from the UE perspective (ULSUP) [NR\_SUL\_combos\_R16] 472

8.8.1 Rapporteur Input (WID/TR/CR) [NR\_SUL\_combos\_R16-Core/Per] 472

8.8.2 UE RF [NR\_SUL\_combos\_R16-Core] 473

8.9 NR Inter-band Carrier Aggregation for 3 bands DL with 1 band UL [NR\_CA\_R16\_3BDL\_1BUL] 473

8.9.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R16\_3BDL\_1BUL-Core/Per] 473

8.9.2 UE RF [NR\_CA\_R16\_3BDL\_1BUL-Core] 474

8.10 NR Inter-band Carrier Aggregation for 4 bands DL with 1 band UL [NR\_CA\_R16\_4BDL\_1BUL] 476

8.10.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R16\_4BDL\_1BUL-Core/Per] 476

8.10.2 UE RF [NR\_CA\_R16\_4BDL\_1BUL-Core] 478

8.11 NR Inter-band Carrier Aggregation/Dual connectivity for 3 bands DL with 2 bands UL [NR\_CADC\_R16\_3BDL\_2BUL] 479

8.11.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R16\_3BDL\_2BUL-Core/Per] 479

8.11.2 UE RF [NR\_CADC\_R16\_3BDL\_2BUL-Core] 479

8.12 Dual Connectivity (EN-DC) with 3 bands DL and 3 bands UL [DC\_R16\_LTE\_NR\_3DL3UL] 481

8.12.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_LTE\_NR\_3DL3UL-Core/Per] 481

8.12.2 UE RF [DC\_R16\_LTE\_NR\_3DL3UL-Core] 482

8.13 Dual Connectivity (EN-DC) of LTE inter-band CA xDL/1UL bands (x=2,3,4) and NR FR1 1DL/1UL band and NR FR2 1DL/1UL band [DC\_R16\_xBLTE\_2BNR\_yDL3UL] 482

8.13.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_xBLTE\_2BNR\_yDL3UL-Core/Per] 482

8.13.2 UE RF [DC\_R16\_xBLTE\_2BNR\_yDL3UL-Core] 483

8.14 29dBm UE Power Class for B41 and n41 [LTE\_NR\_B41\_Bn41\_PC29dBm] 483

8.14.1 Rapporteur Input (WID/TR/CR) [LTE\_NR\_B41\_Bn41\_PC29dBm] 483

8.14.2 UE RF (36.101, 38.101-1, 38.101-3) [LTE\_NR\_B41\_Bn41\_PC29dBm] 483

8.14.3 Others [LTE\_NR\_B41\_Bn41\_PC29dBm] 486

8.15 Power Class 2 UE for EN-DC (1 LTE FDD band +1 NR TDD band) [ENDC\_UE\_PC2\_FDD\_TDD-Core] 486

8.15.1 General [ENDC\_UE\_PC2\_FDD\_TDD-Core] 486

8.15.2 UE RF requirement [ENDC\_UE\_PC2\_FDD\_TDD-Core] 487

8.15.3 Signaling [ENDC\_UE\_PC2\_FDD\_TDD-Core] 489

8.16 Introduction of NR band n259 [NR\_n259] 489

8.16.1 UE RF (38.101-2) [NR\_n259-Core] 489

8.16.2 BS RF (38.104) [NR\_n259-Core] 490

8.16.3 RRM (38.133) [NR\_n259-Core] 491

8.16.4 Others [NR\_n259-Core/Perf] 492

8.17 Adding 25MHz and 50MHz channel bandwidth in NR band n1 [NR\_n1\_BW2] 492

8.17.1 UE RF (38.101-1) [NR\_n1\_BW2-Core] 492

8.17.2 BS RF (38.104) [NR\_n1\_BW2-Core] 492

8.17.3 RRM (38.133) [NR\_n1\_BW2-Core] 493

8.17.4 Others [NR\_n1\_BW2-Core/Perf] 493

8.18 LTE/NR spectrum sharing in band 48/n48 frequency range [NR\_n48\_LTE\_48\_coex-Core] 493

8.18.1 General (such as work plan, AH minutes) [NR\_n48\_LTE\_48\_coex-Core] 493

8.18.2 Channel raster, sync raster, and UL shift [NR\_n48\_LTE\_48\_coex-Core] 493

8.19 Adding 40 MHz channel bandwidth (15, 30 and 60kHz SCS) in NR band n3 [NR\_n3\_BW] 495

8.19.1 UE RF (38.101-1) [NR\_n3\_BW] 495

8.19.2 BS RF (38.104) [NR\_n3\_BW] 496

8.19.3 RRM (38.133) [NR\_n3\_BW] 497

8.19.4 Others [NR\_n3\_BW] 497

8.20 Adding 50 MHz channel bandwidth (15, 30 and 60kHz SCS) in NR band n65 [NR\_n65\_BW] 497

8.20.1 UE RF (38.101-1) [NR\_n65\_BW] 497

8.20.2 BS RF (38.104) [NR\_n65\_BW] 497

8.20.3 RRM (38.133) [NR\_n65\_BW] 498

8.20.4 Others [NR\_n65\_BW] 498

9 Study Items for NR 498

9.1 Study on radiated metrics and test methodology for the verification of multi-antenna reception perf. of NR UEs [FS\_NR\_MIMO\_OTA\_test] 498

9.1.1 General [FS\_NR\_MIMO\_OTA\_test] 498

9.1.2 Performance metrics [FS\_NR\_MIMO\_OTA\_test] 499

9.1.3 Testing methodologies [FS\_NR\_MIMO\_OTA\_test] 499

9.1.3.1 FR1 test methodologies [FS\_NR\_MIMO\_OTA\_test] 499

9.1.3.2 FR2 test methodologies [FS\_NR\_MIMO\_OTA\_test] 499

9.1.4 Channel Models [FS\_NR\_MIMO\_OTA\_test] 502

9.2 Study on 7-24GHz frequency range [FS\_7to24GHz\_NR] 502

9.2.1 General [FS\_7to24GHz\_NR] 502

9.2.2 Regulatory survey [FS\_7to24GHz\_NR] 503

9.2.3 Deployment scenarios [FS\_7to24GHz\_NR] 503

9.2.4 RF technology aspects [FS\_7to24GHz\_NR 504

9.2.5 NR UE [FS\_7to24GHz\_NR] 504

9.2.5.1 NR UE architecture [FS\_7to24GHz\_NR] 504

9.2.5.2 TX requirements [FS\_7to24GHz\_NR] 504

9.2.5.3 RX requirements [FS\_7to24GHz\_NR] 504

9.2.6 NR BS [FS\_7to24GHz\_NR] 504

9.2.6.1 BS types, BS requirement sets [FS\_7to24GHz\_NR] 504

9.2.6.2 NR BS architecture [FS\_7to24GHz\_NR] 504

9.2.6.3 TX requirements [FS\_7to24GHz\_NR] 504

9.2.6.4 RX requirements [FS\_7to24GHz\_NR] 505

10 Rel-17 spectrum related Work Items for NR 505

10.1 Introduction of FR2 FWA UE with maximum TRP of 23dBm for band n257 and n258 [NR\_FR2\_FWA\_Bn257\_Bn258] 506

10.1.1 UE RF (38.101-2) [NR\_FR2\_FWA\_Bn257\_Bn258] 506

10.1.2 BS RF (38.104) [NR\_FR2\_FWA\_Bn257\_Bn258] 508

10.1.3 RRM (38.133) [NR\_FR2\_FWA\_Bn257\_Bn258] 508

10.1.4 Others [NR\_FR2\_FWA\_Bn257\_Bn258] 508

10.2 Introduction of NR band n13 [NR\_n13] 508

10.2.1 UE RF (38.101-1) [NR\_n13-Core] 508

10.2.2 BS RF (38.104) [NR\_n13-Core] 509

10.2.3 RRM (38.133) [NR\_n13-Core] 509

10.2.4 Others [NR\_n13-Core/Perf] 509

11.0 Reply to ITU-R LS (RP-200042) 509

11.1 Study on IMT parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz [FS\_6425\_10500MHz \_NR] 509

11.1.1 UE parameters 509

11.1.2 BS parameters 510

11.1.3 Coexistence study 511

11.1.4 Antenna characteristics 513

11.2 Reply of IMT parameters for other frequency ranges requested in RP-200042 515

12 LTE maintenance (up to Rel15) [WI code or TEI] 516

12.1 BS RF [WI code or TEI] 516

12.2 UE RF [WI code or TEI] 518

12.3 RRM [WI code or TEI] 523

12.4 Demodulation and CSI [WI code or TEI] 528

13 Liaison and output to other groups 534

14 Revision of the Work Plan 535

14.1 Simplification of band combinations in RAN4 specifications 535

14.2 R17 new proposals 537

14.2.1 Basket WI approach for adding existing channel bandwidth on existing NR bands 537

14.2.2 Proposals on adding brand new channel bandwidth 538

14.2.3 Basket WIs for LTE CA, EN-DC, NR CA and NR DC 539

14.2.4 Others 543

14.3 Others 551

15 Any other business 551

15.1 Views on workload management and meeting efficiency improvement 551

15.2 Others 552

16 Close of the E-meeting 552

## 1 Opening of the E-meeting

RAN4 Chairman (Steven Chen) opened the meeting on the RAN4 email reflector. The Chairman reminded delegates of their company's obligations under their SDO's IPR policies:

**Intellectual Property Rights 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 Chairman and Vice-Chairmen 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.

**Statement Regarding Engagement with Companies Added to the U.S. Export Administration Regulations (EAR) Entity List in 3GPP Activities**

**1. Public Information is Not Subject to EAR**

3GPP is an open platform where all contributions (including technology protected or not by patent) made by the different Individual Members under the membership of each respective Organizational Partner are publicly available. Indeed, contributions by all and any Individual Members are uploaded to a public file server when received and then the documents are effectively in the public domain.

In addition, since membership of email distribution lists is open to all, documents and emails distributed by that means are considered to be publicly available.

As a result, information contained in 3GPP contributions, documents, and emails distributed at 3GPP meetings or by 3GPP email distribution lists, because it is made available to the public without restrictions upon its further dissemination, is not subject to the export restrictions of the EAR.

Meeting minutes are maintained for 3GPP meetings. Such meeting minutes for 3GPP meetings are made available to the public without restrictions upon its further dissemination. As a result, information, including information conveyed orally, contained in 3GPP meetings is not subject to the export restriction of the EAR; this would include information conveyed during side meetings that may occur during the main meetings, if these meetings are open to any participants and the results of all said meetings are publicly available without restrictions upon their further dissemination.

**2. Non-Public Information**

Non-public information refers to the information not contained or not intended to be contained in 3GPP contributions, documents or emails. Such non-public information may be disclosed during informal meetings, exchanges, discussions or any form of other communication outside the 3GPP meetings and email distribution lists, and may be subject to the EAR.

**3. Other Information**

Certain encryption software controlled under the International Traffic in Arms Regulations (ITAR), even if publicly available, may still be subject to US export controls other than the EAR.

**4. Conduct of Meetings**

The situation should be considered as "business as usual" during all the meetings called by 3GPP.

**5. Responsibility of Individual Members**

It should be remembered that contributions, meetings, exchanges, discussions or any form of other communication in or outside the 3GPP meetings are of the accountability, integrity and the responsibility of each Individual Member. In addition, Individual Members remain responsible for ensuring their compliance with all applicable export control regulations, including but not limited to EAR.

Individual Members with questions regarding the impact of laws and regulations on their participation in 3GPP should contact their companies’ legal counsels.

**Meeting Arrangements**

The meeting was conducted on three parallel sessions; Main session, RRM session and BS RF Test Demod session. The Main session was chaired by RAN4 Chairman Steven Chen (Futurewei), RRM session was chaired by RAN4 Vice Chairman Andrey Chervyakov (Intel) and BS RF Test Demod session was chaired by RAN4 ViceChairman Haijie Qiu (Samsung). The sessions were further broken down into separate email threads to address specific technical topics lead by assigned discussion moderators. Webinar sessions were used to summarize progress, resolve controversial issues and decide way forward.

## 2 Approval of the agenda

**R4-2006000 Agenda for RAN4 #95-e**

*Type: Agenda For: Approval  
 Source: RAN4 Chairman*

**Discussion:**

.

**Decision: Approved.**

**R4-2006001 RAN4#94-bis-e Meeting Report**

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

**Discussion:**

.

**Decision: Approved.**

**R4-2008290 E-meeting arrangements and guidelines**

*Type: other For: Approval  
 Source: RAN4 Chairman*

**Discussion:**

.

**Decision: Approved.**

**R4-20AAAAA           WF on**

*Type: others For: Approval*

*Source:*

**Discussion:**

.

**Decision:                    Return to.**

## 3 Letters / reports from other groups / meetings

**R4-2006115 Over-the-Air Radiated Performance Testing for 5G mm-Wave (FR2) User**

**Equipment**

*Type: LS in For: Information  
 Original outgoing LS: -, to RAN4, RAN5, cc -  
 Source: 5G Millimeter Wave Sub-Working Group*

**Discussion:**

.

**Decision: Noted.**

**R4-2006116 LS on requirement in Power Class 2 for UL MIMO Test cases**

*Type: LS in For: Information  
 Original outgoing LS: -, to RAN4, RAN5, cc -  
 Source: GCF-CAG*

**Discussion:**

.

**Decision: Noted.**

**R4-2006117 LS on publication of TS.51 V1.0**

*Type: LS in For: Information  
 Original outgoing LS: -, to RAN4, RAN5, cc -  
 Source: GSM Association*

**Discussion:**

.

**Decision: Noted.**

**R4-2006118 Reply LS from CTIA CCLLC OTA WG to the GCF SG Concerning Antenna**

**Performance Assessments**

*Type: LS in For: Information  
 Original outgoing LS: -, to RAN4, RAN5, cc -  
 Source: CTIA OTA Working Group*

**Discussion:**

.

**Decision: Noted.**

**R4-2006119 Reply LS on T\_delta in IAB**

*Type: LS in For: Information  
 Original outgoing LS: R1-2002931, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006120 Reply LS on UE Tx switching period delay and DL interruption**

*Type: LS in For: Information  
 Original outgoing LS: R1-2002960, to RAN4, cc RAN2  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006121 LS response on secondary DRX group**

*Type: LS in For: Information  
 Original outgoing LS: R1-2002961, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006122 LS on subcarrier spacing for CLI-RSSI measurement**

*Type: LS in For: Information  
 Original outgoing LS: R1-2002966, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006123 Reply LS on applicable timing for pathloss RS activated/updated by MAC-CE**

*Type: LS in For: Information  
 Original outgoing LS: R1-2002967, to RAN4, cc -  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006124 LS on removing the word “candidate” in Subclause 8.1.1 of TS 38.133 v16.3.0**

*Type: LS in For: Information  
 Original outgoing LS: R1-2002992, to RAN4, cc -  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006125 LS on Signaling of Q Parameter for NR-U**

*Type: LS in For: Information  
 Original outgoing LS: R1-2003044, to RAN2, RAN4, cc -  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006126 LS on Simultaneous reception of DL signals in intra-frequency DAPS HO**

*Type: LS in For: Information  
 Original outgoing LS: R1-2003058, to RAN4, cc RAN2  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006127 LS on criterion of pathloss measurement failure for power control of SRS for positioning**

*Type: LS in For: Information  
 Original outgoing LS: R1-2003069, to RAN4, cc -  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006128 LS on updated Rel-16 RAN1 UE features lists for LTE**

*Type: LS in For: Information  
 Original outgoing LS: R1-2003070, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006129 LS on Rel-16 RAN1 UE features lists for NR**

*Type: LS in For: Information  
 Original outgoing LS: R1-2003072, to RAN2, RAN4, cc -  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2006130 Reply LS on UL LBT failure recovery for the target cell**

*Type: LS in For: Information  
 Original outgoing LS: R2-2003973, to RAN4, cc RAN1  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2006131 LS on UE specific DRX in NB-IoT**

*Type: LS in For: Information  
 Original outgoing LS: R2-2004054, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2006132 Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2**

*Type: LS in For: Information  
 Original outgoing LS: R2-2004267, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2006133 Reply LS on asymmetric channel bandwidths**

*Type: LS in For: Information  
 Original outgoing LS: R2-2004268, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2008286 LS on positioning SRS during DRX inactive time**

*Type: LS in For: Information  
 Original outgoing LS: R2-2003877, to RAN4, cc RAN1  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2008287 LS on NeedForGap capability**

*Type: LS in For: Information  
 Original outgoing LS: R2-2003883, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

## 4 Rel15 New radio access technology

### 4.1 NE-DC, NGEN-DC, and NR-NR DC Maintenance [NR\_newRAT-Core]

**R4-2008291           Email discussion summary for [95e][101] NR\_NewRAT\_SysParameters**

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

**Discussion:**

**From the first round discussion, option 2 is agreed for both issues 1-1 and 1-2.**

**Issue 1-1: For a band combination for both EN-DC and NE-DC requested, but the EN-DC configuration not completed in Rel-16, how to complete and introduce the band combination in Rel-17?**

* Proposals
  + Option 1: Complete EN-DC first (one TP) and then NE-DC to spec with one draft CR without TP
  + Option 2: Complete EN-DC and NE-DC at the same time (one TP)

**Issue 1-2: For a new band combination for both EN-DC and NE-DC requested, how to complete and introduce the band combination in Rel-17?**

* Proposals
  + Option 1: Complete EN-DC first (one TP) and then NE-DC to spec with one draft CR without TP
  + Option 2: Complete EN-DC and NE-DC at the same time (one TP)

**Decision: Revised to R4-2008932 (from R4-2008291).**

**R4-2008932           Email discussion summary for [95e][101] NR\_NewRAT\_SysParameters**

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

**Discussion:**

**Decision: Return to.**

**R4-2008384           WF on supporting a new channel bandwidth added to an existing operating bands in a manner of release independence from Rel-15**

*Type: others For: Approval*

*Source: ZTE*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008386           WF on support of 30k SCS for SSB of n38 and n39**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006495 Introducing NE-DC combinations into specs**

*Type: discussion For: Discussion  
 Source: Nokia*

**Discussion:**

.

**Decision: Noted.**

**R4-2006649 CR for 38.101-3: Corrections for Ppowerclass and referenced sections**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0250 Cat: F (Rel-15)  
  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Revised to R4-2008382 (from R4-2006649).**

**R4-2008382 CR for 38.101-3: Corrections for Ppowerclass and referenced sections**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0250 Cat: F (Rel-15)  
  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Return to.**

**R4-2006650 Mirror CR for 38.101-3: Corrections for Ppowerclass and referenced sections**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0251 Cat: A (Rel-16)  
  
 Source: T-Mobile USA*

**Discussion:**

.

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

**R4-2006658 On introducing NE-DC combinations into specs**

*Type: discussion For: Discussion  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

.

**Decision: Noted.**

**R4-2007005 CR to TS 38.101-3: Clean up the MSD test point for ENDC(three band)**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0266 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2008383 (from R4-2007005).**

**R4-2008383 CR to TS 38.101-3: Clean up the MSD test point for ENDC(three band)**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0266 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Return to.**

**R4-2007006 CR to TS 38.101-3: Clean up the MSD test point for ENDC(three band)**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0267 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

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

### 4.2 System Parameters Maintenance [NR\_newRAT-Core]

**R4-2006584 On default SSB for band n34, n38, n39, n40, and n50**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

30kHz SCS is proposed

**Discussion:**

.

**Decision: Noted.**

**R4-2006659 Support of release independence from Rel-15**

*Type: discussion For: Approval  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

.

**Decision: Noted.**

**R4-2006660 CR to TS 38.307 correction on support of release independence from Rel-15**

*Type: CR For: Agreement  
 38.307 v15.5.0 CR-0020 Cat: F (Rel-15)  
  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

.

**Decision: Revised to R4-2008385 (from R4-2006660).**

**R4-2008385 CR to TS 38.307 correction on support of release independence from Rel-15**

*Type: CR For: Agreement  
 38.307 v15.5.0 CR-0020 Cat: F (Rel-15)  
  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

.

**Decision: Return to.**

**R4-2006998 Discussion on CA nominal channel spacing without common u**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2006999 CR to TS 38.101-1: Correction on the CA nominal channel spacing**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0337 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2008391 (from R4-2006999).**

**R4-2008391 CR to TS 38.101-1: Correction on the CA nominal channel spacing**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0337 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Return to.**

**R4-2007000 CR to TS 38.101-1: Correction on the CA nominal channel spacing**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0338 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

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

**R4-2007001 CR to TS 38.104: Correction on the CA nominal channel spacing**

*Type: CR For: Agreement  
 38.104 v15.9.0 CR-0177 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2008392 (from R4-2007001).**

**R4-2008392 CR to TS 38.104: Correction on the CA nominal channel spacing**

*Type: CR For: Agreement  
 38.104 v15.9.0 CR-0177 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Return to.**

**R4-2007002 CR to TS 38.104: Correction on the CA nominal channel spacing**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0178 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

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

**R4-2007007 Discussion on SSB pattern for NR bands supporting 30kHz SSB SCS**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2007027 30k SSB SCS for Band n34, n39 and n50**

*Type: CR For: Agreement  
 38.104 v15.9.0 CR-0179 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to replace 15k SSB with 30k SSB SCS for n34, n39 and n50

**Discussion:**

.

**Decision: Revised to R4-2008387 (from R4-2007027).**

**R4-2008387 30k SSB SCS for Band n34, n39 and n50**

*Type: CR For: Agreement  
 38.104 v15.9.0 CR-0179 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to replace 15k SSB with 30k SSB SCS for n34, n39 and n50

**Discussion:**

.

**Decision: Return to.**

**R4-2007028 30k SSB SCS for Band n34, n39 and n50**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0180 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to replace 15k SSB with 30k SSB SCS for n34, n39 and n50

**Discussion:**

.

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

**R4-2007029 30k SSB SCS for Band n34, n39 and n50**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0344 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to replace 15k SSB with 30k SSB SCS for n34, n39 and n50

**Discussion:**

.

**Decision: Revised to R4-2008388 (from R4-2007029).**

**R4-2008388 30k SSB SCS for Band n34, n39 and n50**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0344 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to replace 15k SSB with 30k SSB SCS for n34, n39 and n50

**Discussion:**

.

**Decision: Return to.**

**R4-2007030 30k SSB SCS for Band n34, n39 and n50**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0345 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to replace 15k SSB with 30k SSB SCS for n34, n39 and n50

**Discussion:**

.

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

**R4-2007031 Addition of 30k SSB SCS for Band n38**

*Type: CR For: Agreement  
 38.104 v15.9.0 CR-0181 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce 30k SSB SCS for n38 consistent with the overlapping n41

**Discussion:**

.

**Decision: Revised to R4-2008389 (from R4-2007031).**

**R4-2008389 Addition of 30k SSB SCS for Band n38**

*Type: CR For: Agreement  
 38.104 v15.9.0 CR-0181 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce 30k SSB SCS for n38 consistent with the overlapping n41

**Discussion:**

.

**Decision: Return to.**

**R4-2007032 Addition of 30k SSB SCS for Band n38**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0182 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce 30k SSB SCS for n38 consistent with the overlapping n41

**Discussion:**

.

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

**R4-2007033 Addition of 30k SSB SCS for Band n38**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0346 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce 30k SSB SCS for n38 consistent with the overlapping n41

**Discussion:**

.

**Decision: Revised to R4-2008390 (from R4-2007033).**

**R4-2008390 Addition of 30k SSB SCS for Band n38**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0346 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce 30k SSB SCS for n38 consistent with the overlapping n41

**Discussion:**

.

**Decision: Return to.**

**R4-2007034 Addition of 30k SSB SCS for Band n38**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0347 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce 30k SSB SCS for n38 consistent with the overlapping n41

**Discussion:**

.

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

**R4-2007552 CR to TS37.104[R15]\_Correction on the CA nominal channel spacing**

*Type: CR For: Agreement  
 37.104 v15.10.0 CR-0900 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2008393 (from R4-2007552).**

**R4-2008393 CR to TS37.104[R15]\_Correction on the CA nominal channel spacing**

*Type: CR For: Agreement  
 37.104 v15.10.0 CR-0900 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Return to.**

**R4-2007553 CR to TS37.104[R16]\_Correction on the CA nominal channel spacing catA**

*Type: CR For: Agreement  
 37.104 v16.5.0 CR-0901 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

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

**R4-2007554 CR to TS37.141[R15]\_Correction on the CA nominal channel spacing**

*Type: CR For: Agreement  
 37.141 v15.10.0 CR-0937 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2008394 (from R4-2007554).**

**R4-2008394 CR to TS37.141[R15]\_Correction on the CA nominal channel spacing**

*Type: CR For: Agreement  
 37.141 v15.10.0 CR-0937 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Return to.**

**R4-2007555 CR to TS37.141[R16]\_Correction on the CA nominal channel spacing catA**

*Type: CR For: Agreement  
 37.141 v16.5.0 CR-0938 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

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

**R4-2008170 CR for 38.101-1 channel space for CA\_Rel15**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0390 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008171 CR for 38.101-1 channel space for CA\_Rel16**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0391 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2008172 CR for 38.101-2 channel space for CA\_Rel15**

*Type: CR For: Agreement  
 38.101-2 v15.9.0 CR-0201 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008173 CR for 38.101-2 channel space for CA\_Rel16**

*Type: CR For: Agreement  
 38.101-2 v16.3.0 CR-0202 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2008240 TS38.101-1 CR on 30KHz SSB SCS for n40**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0399 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon, CMCC*

**Abstract:**

38.101-1 CR to replace 15KHz SSB SCS for n40.

**Discussion:**

.

**Decision: Agreed.**

**R4-2008241 TS38.101-1 CR on 30KHz SSB SCS for n40(Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0400 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon, CMCC*

**Abstract:**

38.101-1 CR to replace 15KHz SSB SCS for n40. Rel-16 Cat-A CR.

**Discussion:**

.

**Decision: Agreed.**

**R4-2008242 TS38.104 draft CR on 30KHz SSB SCS for n40**

*Type: CR For: Agreement  
 38.104 v15.9.0 CR-0212 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon, CMCC*

**Abstract:**

38.104 CR to replace 15KHz SSB SCS for n40.

**Discussion:**

.

**Decision: Agreed.**

**R4-2008243 TS38.104 draft CR on 30KHz SSB SCS for n40 (Rel-16)**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0213 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon, CMCC*

**Abstract:**

38.104 CR to replace 15KHz SSB SCS for n40. Rel-16 Cat-A CR.

**Discussion:**

.

**Decision: Agreed.**

**R4-2008244 Proposal on 30KHz SCS SSB for n50 and n38**

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

**Abstract:**

In this contribution, we propose to add 30KHz SSB SCS for n50 and n38.

**Discussion:**

.

**Decision: Noted.**

### 4.3 SUL and LTE-NR co-existence maintenance [NR\_newRAT-Core]

### 4.4 UE RF requirements maintenance [NR\_newRAT]

#### 4.4.1 DC combination including NR carrier and/or NR CA combination maintenance [NR\_newRAT-Core]

**R4-2008292           Email discussion summary for [95e][102] NR\_NewRAT\_UE\_RF\_Part\_1**

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

**Discussion:**

.

**Decision: Revised to R4-2008933 (from R4-2008292).**

**R4-2008933           Email discussion summary for [95e][102] NR\_NewRAT\_UE\_RF\_Part\_1**

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

**Discussion:**

.

**Decision: Return to.**

##### 4.4.1.1 Maintenance for bands and band combinations in 38.101-1 [NR\_newRAT-Core]

**R4-2006135 Corrections of UE co-ex tables for Japan-related bands (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0297 Cat: F (Rel-15)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for Japan band protections for 38.101-1.

**Discussion:**

.

**Decision: Revised to R4-2008970 (from R4-2006135).**

**R4-2008970 Corrections of UE co-ex tables for Japan-related bands (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0297 Cat: F (Rel-15)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for Japan band protections for 38.101-1.

**Discussion:**

.

**Decision: Return to.**

**R4-2008972  Corrections of UE co-ex tables for Japan-related bands (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-* *0405 Cat: A (Rel-16)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006136 Corrections of UE co-ex tables for Japan-related bands (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0298 Cat: F (Rel-16)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for Japan band protections for 38.101-1, designated as Cat F since additional modifications are required for R16, mainly in CA.

**Discussion:**

.

**Decision: Revised to R4-2008971 (from R4-2006136).**

**R4-2008971 Corrections of UE co-ex tables for Japan-related bands (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0298 Cat: F (Rel-16)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for Japan band protections for 38.101-1, designated as Cat F since additional modifications are required for R16, mainly in CA.

**Discussion:**

.

**Decision: Return to.**

**R4-2007025 CR for [agreed] asynchronous operation for NR CA n78-n79**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0342 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Revised to R4-2008395 (from R4-2007025).**

**R4-2008395 CR for [agreed] asynchronous operation for NR CA n78-n79**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0342 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Return to.**

**R4-2007026 CR for [agreed] asynchronous operation for NR CA n78-n79**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0343 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Revised to R4-2008396 (from R4-2007026).**

**R4-2008396 CR for [agreed] asynchronous operation for NR CA n78-n79**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0343 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Return to.**

##### 4.4.1.2 Maintenance for bands and band combinations in 38.101-2 [NR\_newRAT-Core]

**R4-2006496 Proposed response to RAN2 LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2**

*Type: other For: Approval  
 Source: Nokia*

**Discussion:**

.

**Decision: Noted.**

**R4-2006577 Discussion on handling of fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006578 Further reply LS on handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2**

*Type: LS out For: Approval  
 to RAN2  
 Source: MediaTek inc.*

**Discussion:**

.

**Decision: Revised to R4-2008403 (from R4-2006578).**

**R4-2008403 Further reply LS on handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2**

*Type: LS out For: Approval  
 to RAN2  
 Source: MediaTek inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006815 CR for TS 38.101-2: Intra-band non-contiguous CA configuration clarifications**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0169 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006816 CR for TS 38.101-2: Intra-band non-contiguous CA configuration clarifications**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0170 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006907 CR to TS 38.101-2 on corrections to intra-band CA band for FR2 (Rel-15)**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0178 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-2 on corrections to intra-band CA band for FR2 (Rel-15)

**Discussion:**

.

**Decision: Return to.**

**R4-2006908 CR to TS 38.101-2 on corrections to intra-band CA band for FR2 (Rel-16)**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0179 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-2 on corrections to intra-band CA band for FR2 (Rel-16)

**Discussion:**

.

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

##### 4.4.1.3 Maintenance for combinations in 38.101-3 [NR\_newRAT-Core]

**R4-2006137 Corrections of UE co-ex tables for Japan-related bands (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0224 Cat: F (Rel-15)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for Japan band protections for 38.101-3.

**Discussion:**

.

**Decision: Revised to R4-2008397 (from R4-2006137).**

**R4-2008397 Corrections of UE co-ex tables for Japan-related bands (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0224 Cat: F (Rel-15)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for Japan band protections for 38.101-3.

**Discussion:**

.

**Decision: Return to.**

**R4-2006138 Corrections of UE co-ex tables for Japan-related bands (R16)**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0225 Cat: F (Rel-16)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for Japan band protections for 38.101-3, designated as Cat F since additional modifications are required for R16.

**Discussion:**

.

**Decision: Revised to R4-2008398 (from R4-2006138).**

**R4-2008398 Corrections of UE co-ex tables for Japan-related bands (R16)**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0225 Cat: F (Rel-16)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for Japan band protections for 38.101-3, designated as Cat F since additional modifications are required for R16.

**Discussion:**

.

**Decision: Return to.**

**R4-2006342 CR Coexistence cleanup for 38101-3 Rel15**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0231 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008399 (from R4-2006342).**

**R4-2008399 CR Coexistence cleanup for 38101-3 Rel15**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0231 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006452 CR for TS 38.101-3: Missing MSD due to cross band isolation**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0237 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008400 (from R4-2006452).**

**R4-2008400 CR for TS 38.101-3: Missing MSD due to cross band isolation**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0237 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006453 CR for TS 38.101-3: Missing MSD due to cross band isolation**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0238 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008401 (from R4-2006453).**

**R4-2008401 CR for TS 38.101-3: Missing MSD due to cross band isolation**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0238 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006454 CR for TS 38.101-3: MSD due to UL harmonic**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0239 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006455 CR for TS 38.101-3: MSD due to UL harmonic**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0240 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006457 CR for TR37.863-01-01: TP for missing MSD due to UL harmonic and cross band isolation for band combinations**

*Type: CR For: Agreement  
 37.863-01-01 v15.3.0 CR-0008 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008402 (from R4-2006457).**

**R4-2008402 CR for TR37.863-01-01: TP for missing MSD due to UL harmonic and cross band isolation for band combinations**

*Type: CR For: Agreement  
 37.863-01-01 v15.3.0 CR-0008 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006490 MOP for interband EN-DC including both FR1 and FR2 REL15**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0244 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006491 MOP for interband EN-DC including both FR1 and FR2 REL16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0245 Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008229 CR for 38.101-3 Correction on EN-DC synchronous carriers (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0288 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008230 CR for 38.101-3 Correction on EN-DC synchronous carriers (R16)**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0289 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

#### 4.4.2 [FR1] Maintenance for general requirements in 38.101-1 [NR\_newRAT-Core]

**R4-2008293           Email discussion summary for [95e][103] NR\_NewRAT\_UE\_RF\_Part\_2**

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

**Discussion:**

.

**Decision: Revised to R4-2008934 (from R4-2008293).**

**R4-2008934           Email discussion summary for [95e][103] NR\_NewRAT\_UE\_RF\_Part\_2**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008404           WF on EVM Requirement for UL MIMO Transmission**

*Type: others For: Approval*

*Source: Motorola Mobility*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006143 Clarification on asymmetric channel bandwidth operation in FR1**

*Type: discussion For: Endorsement  
 Source: Anritsu Corporation*

**Abstract:**

In this contribution we tried to summarize unclear points on the operation of asymmetric channel bandwidth.

Associated CR R4-2006144/6145

**Discussion:**

.

**Decision: Endorsed.**

**R4-2006144 CR to asymmetric CBW operation in FR1**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0299 Cat: F (Rel-15)  
  
 Source: Anritsu Corporation*

**Abstract:**

Associated discussion paper - R4-2006143

**Discussion:**

.

**Decision: Agreed.**

**R4-2006145 CR to asymmetric CBW operation in FR1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0300 Cat: A (Rel-16)  
  
 Source: Anritsu Corporation*

**Abstract:**

Associated discussion paper - R4-2006143

**Discussion:**

.

**Decision: Agreed.**

**R4-2007003 CR to TS 38.101-1: Replace CBW with symbols defined in the specification.**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0339 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2007004 CR to TS 38.101-1: Replace CBW with symbols defined in the specification.**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0340 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008224 CR for TS 38.101-1 UL configuration Correction for intra-band CA (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0393 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008226 CR for 38.101-1 RFC corrections (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0395 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

##### 4.4.2.1 Power class related to UL MIMO and other related req. (MPR, SEM, etc) [NR\_newRAT-Core]

**R4-2008294           Email discussion summary for [95e][104] NR\_NewRAT\_UE\_RF\_Part\_3**

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

**Discussion:**

.

**Decision: Revised to R4-2008935 (from R4-2008294).**

**R4-2008935           Email discussion summary for [95e][104] NR\_NewRAT\_UE\_RF\_Part\_3**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008408           WF on Power Class related UL MIMO and other requirements**

*Type: others For: Approval*

*Source: vivo*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006344 On transparent Tx\_div**

*Type: discussion For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006366 Transparent Tx Diversity and Power Class 2 Ambiguity for Rel-15 NR**

*Type: discussion For: Approval  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2006749 CR for UL MIMO requirements**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0319 Cat: F (Rel-15)  
  
 Source: CMCC*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006817 NR UE power class for UL MIMO and 1-port transmission**

*Type: other For: Approval  
 38.101-1 v..  
 Source: MediaTek Inc.*

**Abstract:**

In this contribution, we propose to allow NR stand-alone UE to support PC2 UL MIMO and fall back to PC3 for 1-port transmission.

**Discussion:**

.

**Decision: Noted.**

**R4-2006955 Correction to uplink antenna connectors**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0332 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

**Decision: Return to.**

**R4-2006956 Correction to uplink antenna connectors**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0333 Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

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

**R4-2007035 Correction of transmitter characteristics for UL-MIMO: powerclass 2 and fallback**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0348 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the maximum output power requirements for UL-MIMO and the fallback requirement for all UL-MIMO transmitter characteristics

**Discussion:**

.

**Decision: Not pursued.**

**R4-2007036 Correction of transmitter characteristics for UL-MIMO: powerclass 2 and fallback**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0349 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the maximum output power requirements for UL-MIMO and the fallback requirement for all UL-MIMO transmitter characteristics (note not cat A since additional changes in Rel-16)

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2007037 Remove power-class ambiguity for UL-MIMO PC2 capable UE configured for EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0270 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to remove power-class ambiguity for UL-MIMO PC2 capable UE configured for EN-DC (Rel-15 only)

**Discussion:**

.

**Decision: Not pursued.**

**R4-2007071 Further on Rel-15 TxD requirements**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2007072 Further on EN-DC and SA power class**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2007073 Reply LS on Rel-15 TxD**

*Type: LS out For: Approval  
 to RAN5, cc GCF CAG  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2007074 Reply LS on Rel-15 UL MIMO power class**

*Type: LS out For: Approval  
 to GCF CAG, cc RAN5  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2007075 CR on transmit signal quality requirements for single antenna port**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0355 Cat: F (Rel-15)  
  
 Source: OPPO*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008046 UL MIMO open items from WF and LS**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2008047 CR on UL MIMO changes MPR and emissions**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0363 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008054 LS reply on requirement in Power Class 2 for UL MIMO Test cases.**

*Type: LS out For: Approval  
 to GCF-CAG, cc RAN5, PTCRB PVG  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2008094 On the Need to Limit Delay for Transparent Transmit Diversity**

*Type: discussion For: Approval  
 Source: Motorola Mobility Germany GmbH*

**Discussion:**

.

**Decision: Noted.**

**R4-2008211 On Rel-15 PC2 power class**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008213 On Rel-15 PC2 unwanted emissions and MPR requirement**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008215 Draft CR on Rel-15 UL MIMO requirements**

*Type: draftCR For: Endorsement  
 38.101-1 v15.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008256 Discussion on SA TxD Applicability**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2008257 Discussion on NSA Power Class 2 UE UL requirements for R15**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2008258 Draft Reply LS on requirement in Power Class 2 for UL Test cases for GCF**

*Type: LS out For: Approval  
 to GCF-CAG, RAN5, cc PTCRB PVG  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2008259 CR to 38.101-3: clarification of ENDC power class (Mirror for R16)**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0291 Cat: A (Rel-16)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Return to.**

**R4-2008260 CR to 38.101-1: UL MIMO MPR reference table (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0401 Cat: F (Rel-15)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008261 CR to 38.101-1: UL MIMO MPR reference table (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0402 Cat: A (Rel-16)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008276 Considerations on the EVM Definition for an Antenna Port or a Single MIMO Layer**

*Type: discussion For: Discussion  
 Source: Motorola Mobility Germany GmbH*

**Discussion:**

.

**Decision: Noted.**

**R4-2008282 Remove power-class ambiguity for UL-MIMO PC2 capable UE configured for EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0293 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008212 On EN-DC power class**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 4.4.2.2 Other Tx requirements [NR\_newRAT-Core]

**R4-2006777 CR to 38.101-1: Revision to ULMIMO EVM spec**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0321 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

We propose that MIMO receivers in TE be used for UL MIMO compliance tests to reduce the cap between TE and deployment conditions

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006778 CR to 38.101-1: Revision to ULMIMO EVM spec**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0322 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

We propose that MIMO receivers in TE be used for UL MIMO compliance tests to reduce the cap between TE and deployment conditions

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2006960 Correction to FR1 QPSK UL RMC**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0334 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006961 Correction to FR1 QPSK UL RMC**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0335 Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

**Decision: Agreed.**

**R4-2007038 Introduction of the Annex modifiedMPR-Behaviour into the NR SA specification**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0350 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce the Annex on modifiedMPRbehaviour (band specific and indicated in the UE-NR-Capability) into the specification of standalone operation.

**Discussion:**

.

**Decision: Revised to R4-2008379 (from R4-2007038).**

**R4-2008379 Introduction of the Annex modifiedMPR-Behaviour into the NR SA specification**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0350 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce the Annex on modifiedMPRbehaviour (band specific and indicated in the UE-NR-Capability) into the specification of standalone operation.

**Discussion:**

.

**Decision: Return to.**

**R4-2007039 Introduction of the Annex modifiedMPR-Behaviour into the NR SA specification**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0351 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce the Annex on modifiedMPRbehaviour (band specific and indicated in the UE-NR-Capability) into the specification of standalone operation.

**Discussion:**

.

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

**R4-2007067 IBE measurements for half Pi BPSK with spectrum shaping**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0353 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Adopt the same changes for Pi/2 BPSK as in FR2 IBE requirements.

**Discussion:**

.

**Decision: Agreed.**

**R4-2007068 IBE measurements for Pi/2 BPSK with spectrum shaping**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0354 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Adopt the same changes for Pi/2 BPSK as in FR2 IBE requirements.

**Discussion:**

.

**Decision: Agreed.**

**R4-2008057 On the Transmit EVM Requirement for UL MIMO Transmission**

*Type: discussion For: Approval  
 Source: Motorola Mobility Germany GmbH*

**Discussion:**

.

**Decision: Noted.**

**R4-2008115 IBE requirement for almost contiguous allocations**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0378 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008116 IBE requirement for almost contiguous allocations**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0379 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008214 On UL MIMO Tx EVM requirement**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008231 CR for 38.101-1 correction of delta SRS (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0397 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008232 CR for 38.101-1 correction of delta SRS (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0398 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

##### 4.4.2.3 Maintenance for Receiver characteristics [NR\_newRAT-Core]

**R4-2006383 CR to TS 38.101-1 R15: corrections on ACS for intra-band contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0309 Cat: F (Rel-15)  
  
 Source: Xiaomi*

**Abstract:**

Resubmission of endorsed Draft CR R4-2005207

**Discussion:**

.

**Decision: Return to.**

**R4-2006384 CR to TS 38.101-1 R16: corrections on ACS for intra-band contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0310 Cat: A (Rel-16)  
  
 Source: Xiaomi*

**Discussion:**

.

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

**R4-2006385 CR to TS 38.101-3 R15: corrections on ACS for intra-band contiguous EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0233 Cat: F (Rel-15)  
  
 Source: Xiaomi*

**Abstract:**

Resubmission of endorsed Draft CR R4-2005208

**Discussion:**

.

**Decision: Return to.**

**R4-2006386 CR to TS 38.101-3 R16: corrections on ACS for intra-band contiguous EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0234 Cat: A (Rel-16)  
  
 Source: Xiaomi*

**Discussion:**

.

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

**R4-2006953 Update of CSI-RS definition for FR1 DL RMCs**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0330 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

**Decision: Return to.**

**R4-2006954 Update of CSI-RS definition for FR1 DL RMCs**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0331 Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

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

**R4-2008073 CR for 38.101-1 to remove the NR CA configuration for REFSENS exception due to cross band isolation for CA**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0366 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2008074 CR for 38.101-1 to remove the NR CA configuration for REFSENS exception due to cross band isolation for CA (mirror CR)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0367 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008075 CR for 38.101-1 to add the REFSENS exception for inter band CA with SDL**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0368 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2008076 CR for 38.101-1 to add the REFSENS exception for inter band CA with SDL (mirror CR)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0369 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008077 CR for 38.101-1 to add requirements for inter-band CA with two UL bands**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0370 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2008078 CR for 38.101-1 to add requirements for inter-band CA with two UL bands (mirror CR)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0371 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008096 CR for 38.101-1 to remove the NR CA configuration for REFSENS exception due to cross band isolation for CA**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0375 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008097 CR for 38.101-1 to add the REFSENS exception for inter band CA with SDL**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0376 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008405 (from R4-2008097).**

**R4-2008405 CR for 38.101-1 to add the REFSENS exception for inter band CA with SDL**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0376 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008098 CR for 38.101-1 to add requirements for inter-band CA with two UL bands**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0377 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008406 (from R4-2008098).**

**R4-2008406 CR for 38.101-1 to add requirements for inter-band CA with two UL bands**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0377 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008144 OOB blocking for n70 adjacent to n25**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0384 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Revised to R4-2008407 (from R4-2008144).**

**R4-2008407 OOB blocking for n70 adjacent to n25**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0384 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Return to.**

**R4-2008145 OOB blocking for n70 adjacent to n25**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0385 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

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

#### 4.4.3 [FR2] Maintenance for general requirements in 38.101-2 [NR\_newRAT-Core]

**R4-2008295           Email discussion summary for [95e][105] NR\_NewRAT\_UE\_RF\_Part\_4**

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

**Discussion:**

.

**Decision: Revised to R4-2008936 (from R4-2008295).**

**R4-2008936           Email discussion summary for [95e][105] NR\_NewRAT\_UE\_RF\_Part\_4**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008409           WF on out-of-band blocking for DC in FR1**

*Type: others For: Approval*

*Source: Antritsu*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008410           WF on WRC-19 outcome and impact on RAN4 specifications**

*Type: others For: Approval*

*Source: NTT DOCOMO*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006489 CR Correction for REL16 FR2 contiguous intraband CA configuration table**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0157 Cat: F (Rel-16)  
  
 Source: Nokia, Qualcomm Inc, Ericsson*

**Discussion:**

.

**Decision: Return to.**

**R4-2007279 CR to K1 value in Annex A.3.3 of 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0189 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008421           CR to K1 value in Annex A.3.3 of 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR- Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Agreed.**

##### 4.4.3.1 Regulatory Tx/Rx spurious emission limits handling [NR\_newRAT-Core]

**R4-2006329 WRC-19 resolutions and impact to NR bands**

*Type: discussion For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006785 CR to 38.101-2: NS\_202 update after changes to EU regulations**

*Type: CR For: Agreement  
 38.101-2 v15.9.0 CR-0167 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Update of NS\_202 after changes to EU regulations

**Discussion:**

.

**Decision: Agreed.**

**R4-2006786 CR to 38.101-2: NS\_202 update after changes to EU regulations**

*Type: CR For: Agreement  
 38.101-2 v16.3.0 CR-0168 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Update of NS\_202 after changes to EU regulations

**Discussion:**

.

**Decision: Agreed.**

**R4-2006787 Incorporating WRC19 resolutions into FR2 specifications**

*Type: other For: Discussion  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

WRC19 has determined new emissions recommendations that are expected to be adopted by various regulatory bodies. In preparation for future regulation changes, we discuss framework to accommodate changing requirements

**Discussion:**

.

**Decision: Noted.**

**R4-2006788 dCR to 38.101-2: Introduction of NS flags and A-MPR from WRC19 Resolutions**

*Type: draftCR For: Endorsement  
 38.101-2 v15.9.0  
 Source: Qualcomm Incorporated*

**Abstract:**

Introduction of NS flags and A-MPR from WRC19 Resolutions

**Discussion:**

.

**Decision: Return to.**

**R4-2006789 CR to 38.101-2: Introduction of NS flags and A-MPR from WRC19 Resolutions**

*Type: draftCR For: Endorsement  
 38.101-2 v16.3.0  
 Source: Qualcomm Incorporated*

**Abstract:**

Introduction of NS flags and A-MPR from WRC19 Resolutions

**Discussion:**

.

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

**R4-2006790 On obsolescence of NS\_201**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

We would like to confirm that NS\_201 as defined in v15.9 of 38.101-2 is obsolete

**Discussion:**

.

**Decision: Noted.**

**R4-2007077 Further on NS value report**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2008277 CR for EESS protection for n257**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0206 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008278 CR for EESS protection for n257**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0207 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008279 [draft] LS for handling of WRC resolution**

*Type: LS out For: Approval  
 to RAN2  
 Source: NTT DOCOMO INC.*

**Abstract:**

According to the approved WF R4-2005738, LS will be drafted based on the discussion outcome.

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008281 WRC-19 resolution for n257 and n259**

*Type: other For: (not specified)  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Noted.**

##### 4.4.3.2 Maintenance for Transmitter characteristics [NR\_newRAT-Core]

**R4-2006150 CR on ACLR MBW definition in FR2**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0146 Cat: F (Rel-15)  
  
 Source: Anritsu Corporation, Skyworks Solutions Inc.*

**Abstract:**

CR based on the approved WF in #94-e-bis: R4-2005213

**Discussion:**

.

**Decision: Agreed.**

**R4-2006151 CR on ACLR MBW definition in FR2**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0147 Cat: A (Rel-16)  
  
 Source: Anritsu Corporation, Skyworks Solutions Inc.*

**Abstract:**

CR based on the approved WF in #94-e-bis: R4-2005213

**Discussion:**

.

**Decision: Agreed.**

**R4-2006330 Clarification for the definition of the UL duty cycle**

*Type: discussion For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006331 [draft] LS on clarification for the definition of the UL duty cycle**

*Type: LS out For: Approval  
 to RAN2  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008418 (from R4-2006331).**

**R4-2008418 [draft] LS on clarification for the definition of the UL duty cycle**

*Type: LS out For: Approval  
 to RAN2  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006355 CR to 38.101-2 on correction of reference point for beam correspondence side conditions**

*Type: CR For: Agreement  
 38.101-2 v15.9.0 CR-0150 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008420 (from R4-2006355).**

**R4-2008420 CR to 38.101-2 on correction of reference point for beam correspondence side conditions**

*Type: CR For: Agreement  
 38.101-2 v15.9.0 CR-0150 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006356 CR to 38.101-2 on correction of reference point for beam correspondence side conditions R16**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0151 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

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

**R4-2006427 CR to TS38.101-2 on Rel-15 beam correspondence**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0153 Cat: F (Rel-15)  
  
 Source: Samsung*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008377           CR to TS38.101-2 on Rel-15 beam correspondence**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR- Cat: A (Rel-16)  
  
 Source: Samsung*

**Abstract:**

**Decision: Agreed.**

**R4-2006823 CR for TS 38.101-2: Correction for configured transmitted power for CA**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0171 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008416 (from R4-2006823).**

**R4-2008416 CR for TS 38.101-2: Correction for configured transmitted power for CA**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0171 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006824 CR for TS 38.101-2: Correction for configured transmitted power for CA**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0172 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

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

**R4-2006962 Correction to FR2 QPSK UL RMC**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0182 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

**Decision: Revised to R4-2008422 (from R4-2006962).**

**R4-2008422 Correction to FR2 QPSK UL RMC**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0182 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

**Decision: Return to.**

**R4-2006963 Correction to FR2 QPSK UL RMC**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0183 Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

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

**R4-2006964 Correction of Rel-16 UL RMCs**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0184 Cat: F (Rel-16)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

**Decision: Agreed.**

**R4-2007040 Correction of Pcmax for CA**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0186 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to correct Pcmax for CA

**Discussion:**

.

**Decision: Not pursued.**

**R4-2007041 Correction of Pcmax for CA**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0187 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to correct Pcmax for CA

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2007076 On max reference power in UL duty cycle capability**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2008044 CR on Pcmax correction for CA**

*Type: CR For: Agreement  
 38.101-2 v15.9.0 CR-0194 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Revised to R4-2008417 (from R4-2008044).**

**R4-2008417 CR on Pcmax correction for CA**

*Type: CR For: Agreement  
 38.101-2 v15.9.0 CR-0194 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Return to.**

**R4-2008045 Conflict between agreed WF and spec**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2008157 CR for for reference maximum transmission power for maxUplinkdutyCycle\_Rel-15**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0195 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008158 CR for for reference maximum transmission power for maxUplinkdutyCycle\_Rel-16**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0196 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008161 CR for intra-band CA DL Rx requirement-FR2\_Rel-15**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0197 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008162 CR for intra-band CA DL Rx requirement-FR2\_Rel-16**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0198 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008163 CR for modified MPR\_Rel-15**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0199 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008419 (from R4-2008163).**

**R4-2008419 CR for modified MPR\_Rel-15**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0199 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008164 CR for modified MPR\_Rel-16**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0200 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2008174 on reference power corresponding to maxUplinkdutyCycle**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008252 On PTRS configuration for EVM requirement**

*Type: other For: (not specified)  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008253 CR on PTRS configuration for UL RMC**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0204 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008254 CR on PTRS configuration for UL RMC**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0205 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

##### 4.4.3.3 Maintenance for Receiver characteristics [NR\_newRAT-Core]

**R4-2006825 CR for TS 38.101-2: Clarifications on transmitter power for receiver requirements**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0173 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006826 CR for TS 38.101-2: Clarifications on transmitter power for receiver requirements**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0174 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006957 Update of CSI-RS definition for FR2 DL RMCs**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0180 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006958 Update of CSI-RS definition for FR2 DL RMCs**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0181 Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008009 ACS requirement correction**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0193 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

fix CR implementation error

**Discussion:**

.

**Decision: Agreed.**

#### 4.4.4 Maintenance for general requirements in 38.101-3 [NR\_newRAT-Core]

**R4-2006487 FR1+FR2 CA interband CA BCS support REL15**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0242 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2008411 (from R4-2006487).**

**R4-2008411 FR1+FR2 CA interband CA BCS support REL15**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0242 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Return to.**

**R4-2006488 FR1+FR2 CA interband CA BCS support REL16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0243 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2008412 (from R4-2006488).**

**R4-2008412 FR1+FR2 CA interband CA BCS support REL16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0243 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Return to.**

**R4-2006635 CR to 38.101-3 MSD due to UL harmonics and intermodulation interference**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0247 Cat: B (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008413 (from R4-2006635).**

**R4-2008413 CR to 38.101-3 MSD due to UL harmonics and intermodulation interference**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0247 Cat: B (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006636 CR to 38.101-3 MSD due to UL harmonics and intermodulation interference R16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0248 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

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

**R4-2008093 CR to 38.101-3 MSD due to UL harmonics and intermodulation interference R16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0281 Cat: B (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008414 (from R4-2008093).**

**R4-2008414 CR to 38.101-3 MSD due to UL harmonics and intermodulation interference R16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0281 Cat: B (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Return to.**

##### 4.4.4.1 [FR1] Maintenance for Transmitter characteristics within FR1 [NR\_newRAT-Core]

**R4-2006909 CR to TS 38.101-3 on configured output power relaxation due to EN-DC (Rel-15)**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0258 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-3 on configured output power relaxation due to EN-DC (Rel-15)

**Discussion:**

.

**Decision: Agreed.**

**R4-2006910 CR to TS 38.101-3 on configured output power relaxation due to EN-DC (Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0259 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-3 on configured output power relaxation due to EN-DC (Rel-16)

**Discussion:**

.

**Decision: Agreed.**

**R4-2007042 Removal of the Annex modifiedMPR-Behaviour from the NSA specification**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0271 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to remove the Annex on modifiedMPRbehaviour (band specific and indicated in the UE-NR-Capability) from the specification of non-standalone operation.

**Discussion:**

.

**Decision: Revised to R4-2008380 (from R4-2007042).**

**R4-2008380 Removal of the Annex modifiedMPR-Behaviour from the NSA specification**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0271 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to remove the Annex on modifiedMPRbehaviour (band specific and indicated in the UE-NR-Capability) from the specification of non-standalone operation.

**Discussion:**

.

**Decision: Return to.**

**R4-2007043 Removal of the Annex modifiedMPR-Behaviour from the NSA specification**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0272 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to remove the Annex on modifiedMPRbehaviour (band specific and indicated in the UE-NR-Capability) from the specification of non-standalone operation.

**Discussion:**

.

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

**R4-2008136 DC\_2\_n78 and DC\_5\_n78 with n48 coexistence**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0283 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

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

**R4-2008141 DC\_2\_n78 and DC\_5\_n78 with n48 coexistence**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0284 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008159 CR for 38.101-3 UE coexistence for Rel-15**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0285 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008160 CR for 38.101-3 UE coexistence for Rel-16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0286 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008179 on serving cell number for ENDC power class**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008180 LS on serving cell number for ENDC power class**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008415 (from R4-2008180).**

**R4-2008415 LS on serving cell number for ENDC power class**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008283 Coexistence DC\_2\_n78 and DC\_5\_n78 with band 48**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0294 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Withdrawn.**

##### 4.4.4.2 [FR1+FR2] Maintenance for Transmitter characteristics involving both FR1 and FR2 [NR\_newRAT-Core]

##### 4.4.4.3 [FR1] Maintenance for Receiver characteristics within FR1 [NR\_newRAT-Core]

**R4-2006146 CR to out-of-band blocking for DC in FR1**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0226 Cat: F (Rel-15)  
  
 Source: Anritsu Corporation, Rohde&Schwarz, Keysight Technologies*

**Abstract:**

Associated discussion paper : R4-2000439, R4-2003327.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006147 CR to out-of-band blocking for DC in FR1**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0227 Cat: A (Rel-16)  
  
 Source: Anritsu Corporation, Rohde&Schwarz, Keysight Technologies*

**Abstract:**

Associated discussion paper : R4-2000439, R4-2003327.

**Discussion:**

.

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

**R4-2006911 CR to TS 38.101-3 on REFSENS relaxation due to EN-DC (Rel-15)**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0260 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-3 on REFSENS relaxation due to EN-DC (Rel-15)

**Discussion:**

.

**Decision: Agreed.**

**R4-2006912 CR to TS 38.101-3 on REFSENS relaxation due to EN-DC (Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0261 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-3 on REFSENS relaxation due to EN-DC (Rel-16)

**Discussion:**

.

**Decision: Agreed.**

**R4-2008129 OOB blocking for n70 adjacent to n25**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0381 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

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

**R4-2008130 OOB blocking for n70 adjacent to n25**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0382 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

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

##### 4.4.4.4 [FR1+FR2] Maintenance for Receiver characteristics involving both FR1 and FR2 [NR\_newRAT-Core]

#### 4.4.5 Editorial CRs [NR\_newRAT-Core]

**R4-2006148 CR on ACLR MBW definition in FR1**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0301 Cat: F (Rel-15)  
  
 Source: Anritsu Corporation, Skyworks Solutions Inc.*

**Abstract:**

Editorial correction

**Discussion:**

.

**Decision: Return to.**

**R4-2006149 CR on ACLR MBW definition in FR1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0302 Cat: A (Rel-16)  
  
 Source: Anritsu Corporation, Skyworks Solutions Inc.*

**Abstract:**

Editorial correction

**Discussion:**

.

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

**R4-2006390 CR to TS 38.101-3: editorial corrections on wide band Intermodulation for intra-band contiguous EN-DC in FR1**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0235 Cat: D (Rel-15)  
  
 Source: Xiaomi*

**Discussion:**

.

**Decision: Return to.**

**R4-2006392 CR to TS 38.101-3: editorial corrections on wide band Intermodulation for intra-band contiguous EN-DC in FR1**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0236 Cat: A (Rel-16)  
  
 Source: Xiaomi*

**Discussion:**

.

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

**R4-2006846 CR on minor corrections to TS 38.101-1 (Rel-15)**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0323 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

CR on minor corrections to TS 38.101-1 (Rel-15)

**Discussion:**

.

**Decision: Return to.**

**R4-2006870 CR on minor corrections to TS 38.101-1 (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0324 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR on minor corrections to TS 38.101-1 (Rel-16)

**Discussion:**

.

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

**R4-2006903 CR on minor corrections to TS 38.101-2 (Rel-15)**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0176 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

CR on minor corrections to TS 38.101-2 (Rel-15)

**Discussion:**

.

**Decision: Return to.**

**R4-2006904 CR on minor corrections to TS 38.101-2 (Rel-16)**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0177 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR on minor corrections to TS 38.101-2 (Rel-16)

**Discussion:**

.

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

**R4-2006905 CR on minor corrections to TS 38.101-3 (Rel-15)**

*Type: CR For: Agreement  
 38.101-3 v15.9.0 CR-0256 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

CR on minor corrections to TS 38.101-3 (Rel-15)

**Discussion:**

.

**Decision: Return to.**

**R4-2006906 CR on minor corrections to TS 38.101-3 (Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0257 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR on minor corrections to TS 38.101-3 (Rel-16)

**Discussion:**

.

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

**R4-2006939 Maintenance CR to 38101-1 on relative power tolerance R15**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0326 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006940 Maintenance CR to 38101-1 on relative power tolerance R16**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0327 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006941 Maintenance CR to 38307 on a reference spec number R15**

*Type: CR For: Agreement  
 38.307 v15.5.0 CR-0021 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006942 Maintenance CR to 38307 on a reference spec number R16**

*Type: CR For: Agreement  
 38.307 v16.2.0 CR-0022 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

## 5 Rel-16 Work Items for LTE

### 5.1 LTE intra-band Carrier Aggregation for x CC DL/y CC UL including contiguous and non-contiguous spectrum (x>=y) [LTE\_CA\_R16\_intra]

**R4-2008296           Email discussion summary for [95e][106] LTE\_Baskets**

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

**Discussion:**

.

**Decision: Noted.**

#### 5.1.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_intra-Core/Perf]

**R4-2006044 TR 36.716-01-01 v0.9.0 Rel-16 LTE Intra-band**

*Type: draft TR For: Agreement  
 36.716-01-01 v0.9.0  
 Source: Ericsson*

**Abstract:**

TR 36.716-01-01 v0.6.0 Rel-16 LTE Intra-band

**Discussion:**

.

**Decision: To be email approved**

**R4-2007596 Revised WID Basket WI for LTE Intra-band CA Rel-16**

*Type: WID revised For: Decision  
 Source: Ericsson*

**Abstract:**

Revised WID Basket WI for LTE Intra-band CA Rel-16

**Discussion:**

.

**Decision: To be email approved**

**R4-2007604 CR introduction of Rel-16 LTE Intra-band combinations in 36.101**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5637 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction of Rel-16 LTE Intra-band combinations in 36.101

**Discussion:**

.

**Decision: To be email approved**

**R4-2007635 CR Rel-16 for editorial corrections TS 36.101**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5638 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Correcting incorrect references to Table 6.2.4A.9-2 and 6.2.4A.9-3

**Discussion:**

.

**Decision: Agreed.**

#### 5.1.2 UE RF [LTE\_CA\_R16\_intra-Core]

**R4-2006340 CR Coexistence cleanup for 36101 Rel15**

*Type: CR For: Agreement  
 36.101 v15.10.0 CR-5607 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006341 CR Coexistence cleanup for 36101 Rel16**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5608 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006493 CA\_48B A-MPR**

*Type: discussion For: Discussion  
 Source: Nokia*

**Discussion:**

.

**Decision: Noted.**

### 5.2 LTE inter-band Carrier Aggregation for 2 bands DL with 1 band UL [LTE\_CA\_R16\_2BDL\_1BUL]

#### 5.2.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_2BDL\_1BUL-Core/Perf]

**R4-2007560 Revised WID: Rel16 LTE inter-band CA for 2 bands DL with 1 band UL**

*Type: WID revised For: Decision  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007561 Introduction of Rel-16 LTE inter-band CA for 2 bands DL with 1 band UL combinations in TS36101**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5633 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007562 TR 36.716-02-01-030 Rel-16 2 Bands DL and 1 Band UL CA**

*Type: draft TR For: Agreement  
 36.716-02-01 v0.10.0  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: To be email approved**

#### 5.2.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R16\_2BDL\_1BUL-Core]

#### 5.2.3 UE RF without specific issues [LTE\_CA\_R16\_2BDL\_1BUL-Core]

### 5.3 LTE inter-band Carrier Aggregation for 3 bands DL with 1 band UL [LTE\_CA\_R16\_3BDL\_1BUL]

#### 5.3.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_3BDL\_1BUL-Core/Perf]

**R4-2008167 Introduction of completed R16 3DL band combinations to TS 36.101**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5641 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: To be email approved**

**R4-2008169 Revised WID for LTE inter-band CA for 3 bands DL with 1 bands UL**

*Type: WID revised For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: To be email approved**

#### 5.3.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R16\_3BDL\_1BUL-Core]

#### 5.3.3 UE RF without specific issues [LTE\_CA\_R16\_3BDL\_1BUL-Core]

**R4-2008210 TR 36.716-03-01**

*Type: draft TR For: Agreement  
 36.716-03-01 v0.5.0  
 Source: Huawei*

**Discussion:**

.

**Decision: To be email approved**

### 5.4 LTE inter-band Carrier Aggregation for x bands DL (x=4, 5) with 1 band UL [LTE\_CA\_R16\_xBDL\_1BUL]

#### 5.4.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_xBDL\_1BUL-Core]

**R4-2006583 Introduction of LTE inter-band Carrier Aggregation for x bands DL (x=4, 5) with 1 band UL to TS36.101**

*Type: draftCR For: Endorsement  
 36.101 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This is a big CR for the basket work item on LTE CA 4DL/1UL and 5DL/1UL.

**Discussion:**

.

**Decision: To be email approved**

**R4-2008059 Revised WI: Rel'16 LTE inter-band CA for x bands DL (x=4, 5) with 1 band UL**

*Type: WID revised For: Decision  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: To be email approved**

#### 5.4.2 UE RF with 4 LTE bands CA [LTE\_CA\_R16\_xBDL\_1BUL-Core]

#### 5.4.3 UE RF with 5 LTE bands CA [LTE\_CA\_R16\_xBDL\_1BUL-Core]

### 5.5 LTE inter-band Carrier Aggregation for 2 bands DL with 2 band UL [LTE\_CA\_R16\_2BDL\_2BUL]

#### 5.5.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_2BDL\_2BUL-Core]

**R4-2008233 Revised WID for LTE inter-band CA for 2 bands DL with 2 bands UL**

*Type: WID revised For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: To be email approved**

**R4-2008234 Introduction of completed LTE CA for 2 bands DL with 2 bands UL into Rel-16 TS 36.101**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5646 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: To be email approved**

**R4-2008235 TR 36.716-02-02 Rel-16\_v0.6.0**

*Type: draft TR For: Agreement  
 36.716-02-02 v0.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: To be email approved**

#### 5.5.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R16\_2BDL\_2BUL-Core]

#### 5.5.3 UE RF without specific issues [LTE\_CA\_R16\_2BDL\_2BUL-Core]

**R4-2006593 Draft CR: Correction to 2UL 2-14 and 14-30**

*Type: draftCR For: Endorsement  
 36.101 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

the combos are already completed but config and MOP were missed in big CR

**Discussion:**

.

**Decision: Endorsed.**

**R4-2006594 Draft CR: Inclusion of 2UL CA\_14-66 to CA\_14-66-66 and CA\_14-66-66-66**

*Type: draftCR For: Endorsement  
 36.101 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

2UL CA\_14-66 to CA\_14-66-66 and CA\_14-66-66-66

**Discussion:**

.

**Decision: Endorsed.**

### 5.6 LTE inter-band Carrier Aggregation for x bands DL (x= 3, 4, 5) with 2 band UL [LTE\_CA\_R16\_xBDL\_2BUL]

#### 5.6.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_xBDL\_2BUL-Core]

**R4-2006723 TR 36.716-03-02 v1.0.0 LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL in Rel-16**

*Type: draft TR For: Agreement  
 36.716-03-02 v1.0.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006724 Revised WID on LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL in Rel-16**

*Type: WID revised For: Decision  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006725 Introduction of LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL to TS36.101**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5619 Cat: B (Rel-16)  
  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: To be email approved**

#### 5.6.2 UE RF with MSD [LTE\_CA\_R16\_xBDL\_2BUL-Core]

**R4-2006597 TP to TR 36.716-03-02 on 3DL/2UL CA\_2-14-66**

*Type: pCR For: Approval  
 36.716-03-02 v0.11.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

3DL/2UL CA\_2-14-66

**Discussion:**

.

**Decision: Revised to R4-2008333 (from R4-2006597).**

**R4-2008333 TP to TR 36.716-03-02 on 3DL/2UL CA\_2-14-66**

*Type: pCR For: Approval  
 36.716-03-02 v0.11.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

3DL/2UL CA\_2-14-66

**Discussion:**

.

**Decision: Approved.**

**R4-2006598 TP to TR 36.716-03-02 on 4DL/2UL CA\_2-14-30-66**

*Type: pCR For: Approval  
 36.716-03-02 v0.11.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

4DL/2UL CA\_2-14-30-66

**Discussion:**

.

**Decision: Revised to R4-2008334 (from R4-2006598).**

**R4-2008334 TP to TR 36.716-03-02 on 4DL/2UL CA\_2-14-30-66**

*Type: pCR For: Approval  
 36.716-03-02 v0.11.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

4DL/2UL CA\_2-14-30-66

**Discussion:**

.

**Decision: Approved.**

**R4-2006792 TP on summary of self-interference analysis for new x bands (x=3,4,5) DL with 2 bands UL**

*Type: pCR For: Approval  
 36.716-03-02 v0.11.0  
 Source: LG Electronics Polska*

**Discussion:**

.

**Decision: Approved.**

#### 5.6.3 UE RF without MSD [LTE\_CA\_R16\_xBDL\_2BUL-Core]

**R4-2006595 TP to TR 36.716-03-02 on 3DL/2UL CA\_2-14-30**

*Type: pCR For: Approval  
 36.716-03-02 v0.11.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

3DL/2UL CA\_2-14-30

**Discussion:**

.

**Decision: Revised to R4-2008331 (from R4-2006595).**

**R4-2008331 TP to TR 36.716-03-02 on 3DL/2UL CA\_2-14-30**

*Type: pCR For: Approval  
 36.716-03-02 v0.11.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

3DL/2UL CA\_2-14-30

**Discussion:**

.

**Decision: Approved.**

**R4-2006596 TP to TR 36.716-03-02 on 3DL/2UL CA\_14-30-66**

*Type: pCR For: Approval  
 36.716-03-02 v0.11.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

3DL/2UL CA\_14-30-66

**Discussion:**

.

**Decision: Revised to R4-2008332 (from R4-2006596).**

**R4-2008332 TP to TR 36.716-03-02 on 3DL/2UL CA\_14-30-66**

*Type: pCR For: Approval  
 36.716-03-02 v0.11.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

3DL/2UL CA\_14-30-66

**Discussion:**

.

**Decision: Approved.**

### 5.7 RRM for LTE CA basket WI-s [LTE\_CA\_R16\_xxxx]

#### 5.7.1 RRM Core (36.133) [LTE\_CA\_R16\_xxxx-Core]

#### 5.7.2 RRM Perf (36.133) [LTE\_CA\_R16\_xxxx-Perf]

### 5.8 Additional LTE bands for UE category M1 and/or NB1 in Rel-16 [LTE\_bands\_R16\_M1\_NB1]

#### 5.8.1 RF [LTE\_bands\_R16\_M1\_NB1-Core]

#### 5.8.2 Others [LTE\_bands\_R16\_M1\_NB1-Perf]

**R4-2007335 Adding UE category NB1 supporting LTE band 42/43**

*Type: CR For: Agreement  
 36.307 v16.1.0 CR-4442 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

### 5.9 Additional LTE bands for UE category M2 and/or NB2 in in Rel-16 [LTE\_bands\_R16\_M2\_NB2]

#### 5.9.1 RF [LTE\_bands\_R16\_M2\_NB2-Core]

#### 5.9.2 Others [LTE\_bands\_R15\_M2\_NB2-Perf]

### 5.10 Additional MTC enhancements for LTE [LTE\_eMTC5]

#### 5.10.1 General [LTE\_eMTC5]

**R4-2008297           Email discussion summary for [95e][107] LTE\_eMTC5\_IOTenh3**

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

**Discussion:**

.

**Decision: Revised to R4-2008937 (from R4-2008297).**

**R4-2008937           Email discussion summary for [95e][107] LTE\_eMTC5\_IOTenh3**

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

**Discussion:**

.

**Decision: Return to.**

#### 5.10.2 Coexistence with NR [LTE\_eMTC5]

**R4-2007115 TP for TR 37.823: Power boosting for LTE-MTC**

*Type: other For: Approval  
 37.823 v..  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

TP on power boosting for LTE-M inband allocations

**Discussion:**

.

**Decision: Revised to R4-2008423 (from R4-2007115).**

**R4-2008423 TP for TR 37.823: Power boosting for LTE-MTC**

*Type: other For: Approval  
 37.823 v..  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

TP on power boosting for LTE-M inband allocations

**Discussion:**

.

**Decision: Return to.**

**R4-2007586 TP to 37.823: Conclusion**

*Type: pCR For: Approval  
 37.823 v0.4.0  
 Source: Ericsson*

**Abstract:**

in this paper, the TP for the conclusion chapter is proposed.

**Discussion:**

.

**Decision: Revised to R4-2008424 (from R4-2007586).**

**R4-2008424 TP to 37.823: Conclusion**

*Type: pCR For: Approval  
 37.823 v0.4.0  
 Source: Ericsson*

**Abstract:**

in this paper, the TP for the conclusion chapter is proposed.

**Discussion:**

.

**Decision: Return to.**

### 5.11 Additional enhancements for NB-IoT [NB\_IOTenh3]

#### 5.11.1 General [NB\_IOTenh3]

#### 5.11.2 Coexistence with NR [NB\_IOTenh3]

**R4-2006103 CR to TS 37.141: Correction on optional support of NB-IoT operation in NR in-band with CS17**

*Type: CR For: Agreement  
 37.141 v16.5.0 CR-0927 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Add references to Note 6 in the "Supported configurations" row in Table 4.7.1-2 for optional support of NB-IoT operation in NR in-band with CS17.

**Discussion:**

.

**Decision: Agreed.**

**R4-2006104 CR to TS 37.141: Clarifications on test configurations for NB-IoT operation in NR in-band**

*Type: CR For: Agreement  
 37.141 v16.5.0 CR-0928 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

1) Clarify the phrase to ‘RB for NB-IoT operation in NR in-band which is closest to NR minimum guard band’.

2) Clarify the channel bandwidth and SCS of the NR carrier in that bullet in TC22.

**Discussion:**

.

**Decision: Revised to R4-2008425 (from R4-2006104).**

**R4-2008425 CR to TS 37.141: Clarifications on test configurations for NB-IoT operation in NR in-band**

*Type: CR For: Agreement  
 37.141 v16.5.0 CR-0928 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

1) Clarify the phrase to ‘RB for NB-IoT operation in NR in-band which is closest to NR minimum guard band’.

2) Clarify the channel bandwidth and SCS of the NR carrier in that bullet in TC22.

**Discussion:**

.

**Decision: Return to.**

### 5.14 R16 LTE maintenance [WI code]

#### 5.14.1 RF [WI code]

**R4-2008298           Email discussion summary for [95e][108] LTE\_Maintenance**

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

**Discussion:**

.

**Decision: Revised to R4-2008938 (from R4-2008298).**

**R4-2008938           Email discussion summary for [95e][108] LTE\_Maintenance**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2006090 Regulatory updates for Band 24**

*Type: discussion For: Approval  
 Source: Ligado Networks*

**Abstract:**

Describes regulatory updates for Band 24 spectrum and proposals to address them.

**Discussion:**

From first round summary:

There is support from companies in RAN4 with the proposed approach on addressing the regulatory updates through the modification of the existing band 24 rather than introducing a new band as no backwards compatibility issues have been identified, and revise A-MPR accordingly. There is also support to conduct the work under a WI instead of via CRs. Proponent of the WI is encouraged to take into account the companies feedback for the WI request toward RAN plenary.

**Decision: Noted.**

**R4-2006750 Adding Band34 for UE category 1bis into Rel-16 TS 36.101**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5620 Cat: B (Rel-16)  
  
 Source: CMCC*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006751 CR for REL-16 TS36.307 for adding B34 to UE category 1bis**

*Type: CR For: Agreement  
 36.307 v16.1.0 CR-4441 Cat: B (Rel-16)  
  
 Source: CMCC*

**Discussion:**

.

**Decision: Revised to R4-2008426 (from R4-2006751).**

**R4-2008426 CR for REL-16 TS36.307 for adding B34 to UE category 1bis**

*Type: CR For: Agreement  
 36.307 v16.1.0 CR-4441 Cat: B (Rel-16)  
  
 Source: CMCC*

**Discussion:**

.

**Decision: Return to.**

## 6 Rel-16 non-spectrum related work items for NR

### 6.1 NR-based access to unlicensed spectrum [NR\_unlic]

#### 6.1.1 System Parameters [NR\_unlic-Core]

**GTW session on June 1:**

[95e][109] NR\_unlic\_SysParameters: band definition for 6GHz NR-U

The discussion was based on a draft WF prepared by Qualcomm “WF on band definition and corresponding requirements in 6 GHz for Rel-16 NR-U” shared in the online draft folder. There was no agreement and RAN4 will continue to discuss how to define bands for 6GHz.

**R4-2008299           Email discussion summary for [95e][109] NR\_unlic\_SysParameters**

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

**Discussion:**

.

**Decision: Revised to R4-2008939 (from R4-2008299).**

**R4-2008939           Email discussion summary for [95e][109] NR\_unlic\_SysParameters**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008427           WF on band definition and corresponding requirements in 6GHz for Rel-16 NR-U**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008428           Draft CR on Guardband design for NR-U**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Nokia*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008429           WF on 100MHz CBW in NR-U**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008430           Draft CR on Introduction of NR-U CA combinations in Rel-16**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Charter, T-Mobile USA*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008431           Draft CR on Introduction of NR-U EN-DC combinations in Rel-16**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Charter, T-Mobile USA*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008433           WF on wideband operations for Rel-16 NR-U**

*Type: others For: Approval*

*Source: Apple*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006141 NR-U Punctured Channel SEM for 100 MHz Bandwidth**

*Type: discussion For: Discussion  
 Source: CableLabs*

**Discussion:**

.

**Decision: Noted.**

**R4-2006333 On introduction of 6GHz band for NR-U**

*Type: discussion For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006334 NR-U bandwidth classes and wideband operation**

*Type: discussion For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006335 In-carrier guard bands and wideband operation for 60kHz SCS**

*Type: discussion For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006568 On NR-U intra-carrier guardband for 60 kHz**

*Type: discussion For: Approval  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2007175 NR-U - Wideband operation and Intra-Carrier Guardbands**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2007321 Further considerations of spectrum utilization for NR-U**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2007322 Further considerations on guard band on wideband operation**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2007323 Considerations on 100MHz CBW in NR-U**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2007417 Discussion on 100MHz for NR-U**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2007482 Discussion on 6 GHz NR-U band details**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell, AT&T*

**Abstract:**

In this contribution we discuss further details including band number for NR-U in 6 GHz range.

**Discussion:**

.

**Decision: Noted.**

**R4-2008123 NR-U 6 GHz Bands n96 and n97**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

#### 6.1.2 UE RF requirements [NR\_unlic-Core]

**R4-2008300           Email discussion summary for [95e][110] NR\_unlic\_UE\_RF**

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

**Discussion:**

.

**Decision: Revised to R4-2008940 (from R4-2008300).**

**R4-2008940           Email discussion summary for [95e][110] NR\_unlic\_UE\_RF**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008434           WF on NR-U PC3 ACLR and in-band emissions**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008435           WF on NR-U ACS and blocking requirements**

*Type: others For: Approval*

*Source: Apple*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008436           WF on NR-U MPR**

*Type: others For: Approval*

*Source: MediaTek*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008126 Introduction of NR-based access to unlicensed spectrum**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Revised to R4-2008437 (from R4-2008126).**

**R4-2008437 Introduction of NR-based access to unlicensed spectrum**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Return to.**

##### 6.1.2.1 Transmitter characteristics [NR\_unlic-Core]

**R4-2007044 Transmitter characeristics for n46 including initial simulations of required MPR and A-MPR for PC5**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we present initial simulation results of required MPR and A-MPR for 5 GHz NR-U and discuss prerequisites for PC3 simulations

**Discussion:**

.

**Decision: Noted.**

**R4-2007045 Introduction of TX characteristics for 5 GHz and 6 GHz shared channel access**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Ericsson*

**Abstract:**

Running draft CR (placeholder for normative text) for intriducing TX requirements for n46 and 5925-6425 MHz

**Discussion:**

.

**Decision: Not pursued.**

**R4-2007174 NR-U - Capturing Spectral Emission Mask in Specification**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2008438 (from R4-2007174).**

**R4-2008438 NR-U - Capturing Spectral Emission Mask in Specification**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Return to.**

**R4-2007319 Discussion on NR-U UE ACLR**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2007320 Considerations of in-band emissions for NR-U**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008124 NR-U In-band emissions requirement**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2008125 NR-U MPR for PC5 single carrier and wideband**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2008127 NR-U A-MPR for Band n46**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2008132 [NR-U] PC5 and PC3 Back-Off Measurements**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

.

**Decision: Noted.**

##### 6.1.2.2 Receiver characteristics [NR\_unlic-Core]

**R4-2006569 On NR-U UE ACS**

*Type: discussion For: Approval  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2006630 ACS, In-band and Out-of-band Blocking requirement for NR-U**

*Type: discussion For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006827 NR-U UE ACS and in-band blocking requirements for CA**

*Type: other For: Approval  
 38.101-1 v..  
 Source: MediaTek Inc.*

**Abstract:**

In this contribution, we provide technical justifications to support fixing the ACS and IBB interferer/blocker bandwidth at 20 MHz for CA and scaling the ACS requirements as well as the IBB wanted signal power based on the exact aggregated channel bandwid

**Discussion:**

.

**Decision: Noted.**

**R4-2007046 UE RF receiver characteristics for n46 for SA and NSA**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose UE RF requirements with particular emphasis on the two wideband modes

**Discussion:**

.

**Decision: Noted.**

**R4-2007047 Introduction of RX characteristics for 5 GHz and 6 GHz shared channel access**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Ericsson*

**Abstract:**

Running draft CR (placeholder for normative text) for intriducing RX requirements for n46 and 5925-6425 MHz

**Discussion:**

.

**Decision: Not pursued.**

**R4-2007318 Discussion on NR-U UE ACS**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008122 NR-U receiver ACS and blocking**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

#### 6.1.3 Band combination related (Analysis, TPs, etc.) [NR\_unlic-Core]

**R4-2006464 [DC] TP for TR 37.716-11-11 for DC\_48\_n46**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Charter Communications, Inc*

**Discussion:**

.

**Decision: Return to.**

**R4-2006481 TP for TR 38.716-02-00 for CA\_n48-n46**

*Type: pCR For: Approval  
 38.716-02-00 v1.1.0  
 Source: Charter Communications, Inc*

**Discussion:**

.

**Decision: Return to.**

**R4-2007107 Draft CR on Introduction of standalone NR-U combinations in Rel-16**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Ericsson*

**Abstract:**

In this draft CR, we propose some of the relevant requirements for standalone NR-U and propose to approve the related TP

**Discussion:**

.

**Decision: Revised to R4-2008432 (from R4-2007107).**

**R4-2008432 Draft CR on Introduction of standalone NR-U combinations in Rel-16**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Ericsson*

**Abstract:**

In this draft CR, we propose some of the relevant requirements for standalone NR-U and propose to approve the related TP

**Discussion:**

.

**Decision: Return to.**

**R4-2007108 TP on Inclusion of NR-U standalone combinations in TR 38 716-01-01:**

*Type: pCR For: Approval  
 38.716-01-01 v0.11.0  
 Source: Ericsson*

**Abstract:**

In this contribution, we propose some of the relevant requirements for standalone NR-U and propose to approve the related TP

**Discussion:**

.

**Decision: Return to.**

**R4-2007610 TP for TR 37.716-11-11 to correct MSD for DC\_2\_n46**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Ericsson, T-Mobile US, MediaTek*

**Abstract:**

TP for TR 37.716-11-11 to correct MSD for DC\_2\_n46

**Discussion:**

.

**Decision: Return to.**

**R4-2007918 TP for TR 38.716-02-00 to correct MSD for CA\_n25-n46**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Ericsson, T-Mobile US, MediaTek*

**Abstract:**

TP for TR 38.716-02-00 to correct MSD for CA\_n25-n46

**Discussion:**

.

**Decision: Return to.**

### 6.4 5G V2X with NR sidelink [5G\_V2X\_NRSL]

#### 6.4.1 General [5G\_V2X\_NRSL]

**R4-2008301           Email discussion summary for [95e][111] 5G\_V2X\_NRSL\_UE\_RF\_TX**

*Type: other For: Information  
 Source: Moderator (LG Electronics)*

**Discussion:**

.

**Decision: Revised to R4-2008941 (from R4-2008301).**

**R4-2008941           Email discussion summary for [95e][111] 5G\_V2X\_NRSL\_UE\_RF\_TX**

*Type: other For: Information  
 Source: Moderator (LG Electronics)*

**Discussion:**

.

**Decision: Return to.**

**R4-2008439           WF on A-MPR for PSSCH/PSCCH transmission**

*Type: others For: Approval*

*Source: LG Electronics*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008440           WF on A-MPR for simultaneous PSFCH transmission**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008441           WF on MPR/A-MPR for S-SSB transmission**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008446           WF on TR/TS structures and common terminology for NR V2X UE**

*Type: others For: Approval*

*Source: Vivo, Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006247 Discussion on TR/TS structures and common terminology for NR V2X UE**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2006745 TR update TR38.886 v1.0.0**

*Type: draft TR For: Agreement  
 38.886 v1.0.0  
 Source: LG Electronics France*

**Discussion:**

.

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

**R4-2006747 CR on NR V2X UE RF requirements for single carrier in TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0317 Cat: B (Rel-16)  
  
 Source: LG Electronics France*

**Discussion:**

.

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

**R4-2007090 Further discussion on general TR/TS structure issue and terminology for NR V2X**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

#### 6.4.2 System parameters [5G\_V2X\_NRSL-Core]

**R4-2008303           Email discussion summary for [95e][113] 5G\_V2X\_NRSL\_SysParameters**

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

**Discussion:**

.

**Decision: Revised to R4-2008943 (from R4-2008303).**

**R4-2008943           Email discussion summary for [95e][113] 5G\_V2X\_NRSL\_SysParameters**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008453           WF on remaining issues for NR V2X system parameters**

*Type: others For: Approval*

*Source: vivo*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008454           WF on BS impact of NR V2X**

*Type: others For: Approval*

*Source: CATT*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006260 Discussion on BS impact of NR V2X**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2006264 CR for TS38.104, Introduce BS impact of NR V2X**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0169 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Revised to R4-2008457 (from R4-2006264).**

**R4-2008457 CR for TS38.104, Introduce BS impact of NR V2X**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0169 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Return to.**

**R4-2006757 Discussion on SL-Uu simultaneous transmission in a UE in licensed band in rel-16**

*Type: discussion For: (not specified)  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Noted.**

**R4-2006762 Discussion the remaining issues for n79 NR-V2X**

*Type: discussion For: Approval  
 Source: CMCC*

**Discussion:**

.

**Decision: Noted.**

**R4-2007091 Revisions on the CR on NR V2X UE RF requirements for single carrier in TS38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: vivo*

**Discussion:**

.

**Decision: Revised to R4-2008456 (from R4-2007091).**

**R4-2008456 Revisions on the CR on NR V2X UE RF requirements for single carrier in TS38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: vivo*

**Discussion:**

.

**Decision: Return to.**

**R4-2007092 Further discussion on the synchronization mechanism between SL and Uu in the same TDD licensed band**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2008200 TP on Switching Period for Indevice Coexistence**

*Type: discussion For: (not specified)  
 Source: Futurewei Technologies*

**Discussion:**

.

**Decision: Revised to R4-2008455 (from R4-2008200).**

**R4-2008455 TP on Switching Period for Indevice Coexistence**

*Type: discussion For: (not specified)  
 Source: Futurewei Technologies*

**Discussion:**

.

**Decision: Return to.**

**R4-2008220 On synchronization scenario for NR V2X in licensed band**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

#### 6.4.3 UE RF requirements [5G\_V2X\_NRSL-Core]

**R4-2006746 TP on remaining issues for NR V2X UE (Coexistence table to remove n47 ETSI requirements -30dBm/MHz, configured Tx power)**

*Type: pCR For: Approval  
 38.886 v0.6.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Revised to R4-2008442 (from R4-2006746).**

**R4-2008442 TP on remaining issues for NR V2X UE (Coexistence table to remove n47 ETSI requirements -30dBm/MHz, configured Tx power)**

*Type: pCR For: Approval  
 38.886 v0.6.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Return to.**

##### 6.4.3.1 Transmitter characteristics [5G\_V2X\_NRSL-Core]

**R4-2006701 TP on NR V2X A-MPR for PSSCH/PSCCH**

*Type: pCR For: Approval  
 38.886 v0.6.0  
 Source: LG Electronics Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006758 Discussion on position of Switching period between LTE V2X and NR V2X at n47**

*Type: discussion For: (not specified)  
 Source: LG Electronics France*

**Discussion:**

.

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

**R4-2006818 TX diversity for NR-V2X**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0383 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

We define TX diversity requirements for NR-V2X

**Discussion:**

.

**Decision: Revised to R4-2008445 (from R4-2006818).**

**R4-2008445 TX diversity for NR-V2X**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0383 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

We define TX diversity requirements for NR-V2X

**Discussion:**

Chair: it should be treated as a draft CR. If endorsed, will be included in R4-2006747.

**Decision: Return to.**

**R4-2006820 TP on 5G V2X MPR A-MPR for S-SSB transmission**

*Type: pCR For: Approval  
 38.886 v0.6.0  
 Source: Qualcomm Incorporated*

**Abstract:**

TP to TR 38.886 on MPR, A-MPR specifications for SSSB

**Discussion:**

.

**Decision: Noted.**

**R4-2007880 TP to TR38.886 V2X PSSCH PSCCH A-MPR**

*Type: pCR For: Approval  
 38.886 v0.6.0  
 Source: Qualcomm Austria RFFE GmbH*

**Abstract:**

A-MPR study and spec formulation for 10 and 40 MHz V2X PSSCH PSCCH

**Discussion:**

.

**Decision: Noted.**

**R4-2007881 TP to TR38.886 A-MPR for 10 and 40MHz V2X PSFCH**

*Type: pCR For: Approval  
 38.886 v0.6.0  
 Source: Qualcomm Incorporated*

**Abstract:**

A-MPR study and spec formulation for 10 and 40 MHz V2X PSFCH

**Discussion:**

.

**Decision: Noted.**

**R4-2008079 Discussion on ETSI NS issue, NS\_33 AMPR and spurious emission for UE co-existence for V2X**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008080 TP to update MPR\AMPR requirements for both PC3 and PC2 NR V2X in band n47**

*Type: pCR For: Approval  
 38.886 v0.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008081 DraftCR to specify MPR\AMPR requirements for PC3 NR V2X in band n47**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008443 (from R4-2008081).**

**R4-2008443 DraftCR to specify MPR\AMPR requirements for PC3 NR V2X in band n47**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008082 DraftCR to specify configured transmitted power for NR V2X in band n47**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008444 (from R4-2008082).**

**R4-2008444 DraftCR to specify configured transmitted power for NR V2X in band n47**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008201 Simultaneous transmission of UL and SL in a licensed carrier**

*Type: discussion For: (not specified)  
 Source: Futurewei Technologies*

**Discussion:**

.

**Decision: Noted.**

**R4-2008203 Reply LS to RAN2 on UL-SL Prioritization**

*Type: LS out For: Approval  
 to RAN2, RAN1  
 Source: Futurewei Technologies*

**Discussion:**

.

**Decision: Revised to R4-2008447 (from R4-2008203).**

**R4-2008447 Reply LS to RAN2 on UL-SL Prioritization**

*Type: LS out For: Approval  
 to RAN2, RAN1  
 Source: Futurewei Technologies*

**Discussion:**

.

**Decision: Return to.**

##### 6.4.3.2 Receiver characteristics [5G\_V2X\_NRSL-Core]

**R4-2008302           Email discussion summary for [95e][112] 5G\_V2X\_NRSL\_UE\_RF\_RX**

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

**Discussion:**

.

**Decision: Revised to R4-2008942 (from R4-2008302).**

**R4-2008942           Email discussion summary for [95e][112] 5G\_V2X\_NRSL\_UE\_RF\_RX**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008448           WF on remaining Rx RF requirements for NR V2X**

*Type: others For: Approval*

*Source: CATT*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006259 Discussion on remaining issues on Rx RF requirements for NR V2X**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2006261 TP on remaining issues on Rx RF requirements for NR V2X**

*Type: pCR For: Approval  
 38.886 v0.6.0  
 Source: CATT*

**Discussion:**

.

**Decision: Revised to R4-2008449 (from R4-2006261).**

**R4-2008449 TP on remaining issues on Rx RF requirements for NR V2X**

*Type: pCR For: Approval  
 38.886 v0.6.0  
 Source: CATT*

**Discussion:**

.

**Decision: Return to.**

**R4-2006262 CR for TS38.101-1, Introduce Rx RF requirements for NR V2X single carrier**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0303 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Revised to R4-2008450 (from R4-2006262).**

**R4-2008450 CR for TS38.101-1, Introduce Rx RF requirements for NR V2X single carrier**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0303 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Return to.**

**R4-2006821 REFSENS issues in V2X**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

A new values for diversity gain and n38 NF and parameters for simulating SNR is proposed for NR V2X

**Discussion:**

.

**Decision: Noted.**

**R4-2008223 On remaining NR V2X Rx requirements**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

#### 6.4.4 Concurrent operation (scenarios, requirements, etc) [5G\_V2X\_NRSL-Core]

**R4-2008304           Email discussion summary for [95e][114] 5G\_V2X\_NRSL\_UE\_Concurrent**

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

**Discussion:**

.

**Decision: Revised to R4-2008944 (from R4-2008304).**

**R4-2008944           Email discussion summary for [95e][114] 5G\_V2X\_NRSL\_UE\_Concurrent**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008451           WF on con-current operation remaining issues**

*Type: others For: Approval*

*Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006249 Discussion on con-current operation**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2006263 CR for TS38.101-1, Introduce Rx RF requirements for NR V2X con-current operation**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0304 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2007093 Discussion on current operation scenario and clarification**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2008219 On switching period for LTE SL and NR SL**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008221 On remaining issues of con-current operation**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008222 CR for TS 38.101-3: NR V2X con-current operation**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0287 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008452 (from R4-2008222).**

**R4-2008452 CR for TS 38.101-3: NR V2X con-current operation**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0287 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2006248 Discussion on switching period in ITS band for NR V2X**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2006819 Switching time between NR SL and LTE SL**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

Switching time for transitioning between NR SL and LTE SL is proposed

**Discussion:**

.

**Decision: Noted.**

**R4-2007342 On switching period for LTE SL and NR SL**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

### 6.6 Multi-RAT Dual-Connectivity and Carrier Aggregation enhancements [LTE\_NR\_DC\_CA\_enh]

#### 6.6.1 General [LTE\_NR\_DC\_CA\_enh-Core]

**R4-2008305           Email discussion summary for [95e][115] LTE\_NR\_DC\_CA\_enh\_RF**

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

**Discussion:**

.

**Decision: Revised to R4-2008945 (from R4-2008305).**

**R4-2008945           Email discussion summary for [95e][115] LTE\_NR\_DC\_CA\_enh\_RF**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008458           WF on a P-Max limitation for FR2 in terms of TRP**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008459           WF on single UL for DC-12-n71**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006585 On p-Max for FR2**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

p-max is required for interference suppression in some deployments

**Discussion:**

.

**Decision: Noted.**

**R4-2006586 Introduction of p-Max to FR2**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0159 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

CR to introduce p-max as TRP to FR2.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006587 draft Reply LS on power control for NR-DC**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

asks RAN2 to revise p-Max for FR2

**Discussion:**

.

**Decision: Noted.**

**R4-2006655 Reconsideration of mandatory UL NR-CA and NR-DC**

*Type: discussion For: Approval  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Noted.**

**R4-2006360 Views on P-Max for FR2**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

#### 6.6.2 RF requirements [LTE\_NR\_DC\_CA\_enh-Core]

**R4-2006451 CR for TS 38.101-1: UL harmonic MSD and OOBB exception**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0311 Cat: F (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006566 Pmax in FR2**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2006828 Views on P-max for FR2 in Rel-16**

*Type: other For: Approval  
 38.101-2 v..  
 Source: MediaTek Inc.*

**Abstract:**

In this contribution, we share our views on the definition of P-max and the practicality of introducing this parameter into the UE configured transmitted requirement.

**Discussion:**

.

**Decision: Noted.**

**R4-2006997 CR to TS38.101-1: Introduction of NR DC(Clauses 3~5)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0336 Cat: B (Rel-16)  
  
 Source: ZTE Corporation, Ercisson*

**Discussion:**

.

**Decision: Agreed.**

**R4-2007048 The "blind" scheme for FDD-TDD EN-DC PC2 adopted for inter-band TDD-TDD EN-DC PC2**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

The "blind" scheme for FDD-TDD EN-DC only slightly modified could also become the baseline for TDD-TDD EN-DC PC2

**Discussion:**

.

**Decision: Revised to R4-2008460 (from R4-2007048).**

**R4-2008460 The "blind" scheme for FDD-TDD EN-DC PC2 adopted for inter-band TDD-TDD EN-DC PC2**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

The "blind" scheme for FDD-TDD EN-DC only slightly modified could also become the baseline for TDD-TDD EN-DC PC2

**Discussion:**

.

**Decision: Noted.**

**R4-2007049 Introduction of cell-specific and UE-specific P-Max for FR2**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0352 Cat: F (Rel-16)  
  
 Source: Ericsson, Sony*

**Abstract:**

CR to introduce cell-specific and UE-specific P-Max for the MCG

**Discussion:**

.

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

**R4-2007799 CR to 38.101-1 for Introduction of requirements for NR-DC**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0362 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce requirements for NR-DC in FR1

**Discussion:**

.

**Decision: Agreed.**

**R4-2007917 Introduction of cell-specific and user-specific P-Max for FR2**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0192 Cat: F (Rel-16)  
  
 Source: Ericsson, Sony*

**Abstract:**

CR to introduce cell-specific and UE-specific P-Max for the MCG

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008053 p-max feasibility for Fr2**

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

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008083 Discussion on RF requirements about DC\_12\_n71**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008084 CR for 38.101-3 to specify the RF requirements for DC\_12\_n71**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0372 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008265 Further discussion on the necessity of p-UE-FR2**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2008266 Draft Reply LS on power control for NR-DC**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2008272 Introduction of P-max in FR2**

*Type: other For: (not specified)  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Noted.**

### 6.11 Enhancements on MIMO for NR [NR\_eMIMO]

#### 6.11.1 UE RF core requirements (38.101) [NR\_eMIMO-Core]

**R4-2008306           Email discussion summary for [95e][116] NR\_eMIMO\_UE\_RF**

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

**Discussion:**

.

**Decision: Revised to R4-2008946 (from R4-2008306).**

**R4-2008946           Email discussion summary for [95e][116] NR\_eMIMO\_UE\_RF**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008461           WF on MPR with Pi/2 BPSK DMRS**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008462           WF on Uplink Full Power Transmission**

*Type: others For: Approval*

*Source: Samsung*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008465           WF on Enabling Transparent TxD in Rel-16**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

##### 6.11.1.1 DMRS enhancement with PI/2 BPSK [NR\_eMIMO-Core]

**R4-2006494 MPR With PI/2 BPSK DMRS**

*Type: discussion For: Discussion  
 Source: Nokia*

**Discussion:**

.

**Decision: Noted.**

**R4-2006822 Pi\_2 BPSK DMRS Investigation**

*Type: other For: Approval  
 38.101-3 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

Pi/2 BPSK results and spec structure are discussed

**Discussion:**

.

**Decision: Noted.**

**R4-2008216 On Pi/2 BPSK DMRS**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 6.11.1.2 Uplink Tx Full Power transmission [NR\_eMIMO-Core]

**R4-2006345 On UL Full Power Transmission**

*Type: discussion For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006367 Discussion on Uplink Full Power Transmission (ULFPTx)**

*Type: discussion For: Approval  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2006368 CR to TS38.101-1 on introduction of Uplink Full Power Transmission**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0308 Cat: B (Rel-16)  
  
 Source: Samsung*

**Discussion:**

.

**Decision: Revised to R4-2008463 (from R4-2006368).**

**R4-2008463 CR to TS38.101-1 on introduction of Uplink Full Power Transmission**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0308 Cat: B (Rel-16)  
  
 Source: Samsung*

**Discussion:**

.

**Decision: Return to.**

**R4-2006369 CR to TS38.101-2 on introduction of Uplink Full Power Transmission**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0152 Cat: B (Rel-16)  
  
 Source: Samsung*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006668 [NR\_eMIMO] RIMD impact on EVM and MPR for UL MIMO and Tx Diversity**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

MPR requirement needs to be revisited for PC2 using 2xPC3 PAs and especially account for reverse IMD issues inherent to UL MIMO and Tx Diversity, more specifically its impact on EVM. We have done further measurements that apply to PC2 implementations usin

**Discussion:**

.

**Decision: Noted.**

**R4-2006779 CR to clarify UE SRS port configuration for UL tests**

*Type: CR For: Agreement  
 38.101-2 v16.3.0 CR-0165 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

We discuss applicability of Rel-16 PA modes to FR2

**Discussion:**

.

**Decision: Revised to R4-2008464 (from R4-2006779).**

**R4-2008464 CR to clarify UE SRS port configuration for UL tests**

*Type: CR For: Agreement  
 38.101-2 v16.3.0 CR-0165 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

We discuss applicability of Rel-16 PA modes to FR2

**Discussion:**

.

**Decision: Return to.**

**R4-2007050 Verification of FP modes and relation to Rel-15 requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose an updated test scope for the FP modes and that an additional power-class capability is introduced for UEs supporting a higher power class only for two-layer transmission

**Discussion:**

.

**Decision: Noted.**

**R4-2007051 Specification framework for introduction of requirements for the FP modes**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose a specificaion framework for the FP

**Discussion:**

.

**Decision: Noted.**

**R4-2007078 Further on EN-DC and SA power class (Rel-16)**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2007079 CR to TS 38.101-3 EN-DC requirement alignment (R16)**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: OPPO*

**Discussion:**

.

**Decision: Return to.**

**R4-2008048 eMIMO FPTX Open items for FR1**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2008049 Tx diversity open items for Rel-16**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2008050 draft CR to enable FPULTX**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008185 On Release 15 and 16 two Intra-band Transmit Chain Cases**

*Type: discussion For: Discussion  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

this contribution looks into all the different intra-band 2Tx cases in Release 15 and 16 for examination of potential gaps in capability signaling and requirements.

**Discussion:**

.

**Decision: Noted.**

**R4-2008217 On NR eMIMO full power transmission**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008218 draft CR for TS 38.101-1 eMIMO full power transmission**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

### 6.12 Add support of NR DL 256QAM for FR2 [NR\_DL256QAM\_FR2]

#### 6.12.1 General [NR\_DL256QAM\_FR2]

**R4-2008307           Email discussion summary for [95e][117] NR\_DL256QAM\_FR2**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Discussion:**

.

**Decision: Revised to R4-2008947 (from R4-2008307).**

**R4-2008947           Email discussion summary for [95e][117] NR\_DL256QAM\_FR2**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Discussion:**

.

**Decision: Return to.**

**R4-2006927 Draft TR 38.883 for FR2 DL 256QAM v1.3.0**

*Type: draft TR For: Agreement  
 38.883 v1.3.0  
 Source: China Telecom*

**Abstract:**

Update TR to implement TPs approved in last meeting.

**Discussion:**

.

**Decision: Agreed.**

**R4-2008968           Draft TR 38.883 for FR2 DL 256QAM v1.4.0**

*Type: draft TR For: Agreement  
 38.883 v1.4.0  
 Source: China Telecom*

**Discussion:**

.

**Decision:                    To be email approved**

**R4-2006928 TP for TR 38.883 Editoral corrections**

*Type: pCR For: Approval  
 38.883 v1.3.0  
 Source: China Telecom*

**Abstract:**

This TP is to clean up TR 38.883

**Discussion:**

.

**Decision: Return to.**

#### 6.12.2 BS RF core requirements (38.104) [NR\_DL256QAM\_FR2]

**R4-2007128 CR to TS 38.104: Introduction of FR2 DL 256QAM**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0185 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, China Telecom, Verizon, NTT Docomo, T-Mobile, Ericsson*

**Abstract:**

Tx EVM requirement for 256QAM is added for BS type 2-O.

**Discussion:**

.

**Decision: Agreed.**

**R4-2007129 CR to TS 38.141-2: Introduction of FR2 DL 256QAM**

*Type: CR For: Agreement  
 38.141-2 v16.3.0 CR-0165 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, China Telecom, Verizon, NTT Docomo, T-Mobile*

**Abstract:**

FR2 DL 256QAM requirements are introduced to the conformance specification

**Discussion:**

.

**Decision: Agreed.**

#### 6.12.3 UE RF core requirements (38.101-2) [NR\_DL256QAM\_FR2]

**R4-2007088 Maximum Input Level for 256 QAM FR2**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Approved.**

**R4-2007127 CR to TS 38.101-2: Introduction of FR2 DL 256QAM**

*Type: CR For: Agreement  
 38.101-2 v16.3.0 CR-0188 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, China Telecom, Verizon, NTT Docomo, T-Mobile*

**Abstract:**

Maximum input power requirement for 256QAM and RMC for 256QAM are introduced.

**Discussion:**

.

**Decision: Agreed.**

### 6.13 RF requirements for NR frequency range 1 (FR1) [NR\_RF\_FR1]

#### 6.13.1 RF core requirements [NR\_RF\_FR1]

**R4-2008308           Email discussion summary for [95e][118] NR\_RF\_FR1\_Part\_1**

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

**Discussion:**

.

**Decision: Revised to R4-2008948 (from R4-2008308).**

**R4-2008948           Email discussion summary for [95e][118] NR\_RF\_FR1\_Part\_1**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008466           WF on intra-band contiguous CA MPR and AMPR remaining issues**

*Type: others For: Approval*

*Source: Skyworks, Nokia*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008467           WF on DC location of intra-band CA**

*Type: others For: Approval*

*Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008469           WF on ACS Jammer bandwidth of Bandwidth class C**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008470           WF on intra-band UL NC CA UE capability**

*Type: others For: Approval*

*Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008471           WF on remaining issue on MPR and AMPR for intra-band non-contiguous CA**

*Type: others For: Approval*

*Source: Skyworks, Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008473           WF on ULSUP time mask requirement**

*Type: others For: Approval*

*Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:                    Return to.**

##### 6.13.1.1 Almost contiguous allocations for CP-OFDM UL for FR1 [NR\_RF\_FR1]

##### 6.13.1.2 Intra-band contiguous DL CA for FR1 [NR\_RF\_FR1]

**R4-2008072 CR for 38.101-1 to introduce BCS2 for CA\_n78(2A).**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0365 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Return to.**

**R4-2008146 FR1 Intra-band DLCA ACS IBB and Wideband Intermodulation**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0386 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Return to.**

**R4-2008147 FR1 Intra-band CA ACS IBB and WB IMD**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2008156 CR for 38.101-1 DL RF requirement correction**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0388 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

##### 6.13.1.3 Intra-band contiguous UL CA for FR1 power class 3 [NR\_RF\_FR1]

**R4-2006637 [NR FR1 ULCA] Contiguous Intra-band ULCA Allocation Definitions**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution we provide generalized allocations parameters and inner outer allocation definitions for contiguous and non-contiguous allocations for class B and class C UL CA

**Discussion:**

.

**Decision: Noted.**

**R4-2006638 [NR FR1 ULCA] Class B and C UL CA MPR Proposals and A-MPR Evaluation**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, a set of results are presented based on new measurements using the agreed bandwidths definitions, allocation definitions according to [3] and propose associated MPR for class B and C ULCA and provides worst case A-MPR for NS04 and NS

**Discussion:**

.

**Decision: Noted.**

**R4-2008010 ACLR measurement center frequency for NR FR1 contiguous CA**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2008148 on FR1 UL CA MPR requirement Rel-16**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008149 on FR1 UL CA DC location**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008153 CR on FR1 UL contiguous CA requirement**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0387 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008468 (from R4-2008153).**

**R4-2008468 CR on FR1 UL contiguous CA requirement**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0387 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008202 Intra-band Contiguous ULCA MBW and ACLR Offset**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2008207 Intra-band Contiguous ULCA MPR**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2008255 [NR FR1 ULCA] Class B and C Bandwidth Verification**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we calculate a few contiguous intra-band UL bandwidth cases to verify resulting guard bands and provide ACLR measurement bandwidth position shift.

**Discussion:**

.

**Decision: Noted.**

##### 6.13.1.4 Intra-band non-contiguous UL CA for FR1 power class 3 [NR\_RF\_FR1]

**R4-2008039 [FR1 NR ULCA] Non-contiguous UL CA Architecture, Signaling and MPR evaluation**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we discuss architecture and signaling aspects and provide first estimates for MPR. Since there was only 2 weeks available between end of last meeting our analysis is based on contiguous UL CA and ENDC data.

**Discussion:**

.

**Decision: Noted.**

**R4-2008150 on FR1 UL non-contiguous CA UE capability**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008151 on FR1 UL non-contiguous CA MPR requirement Rel-16**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008165 CR for intra-band UL non-contiguous CA requirement**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0389 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008472 (from R4-2008165).**

**R4-2008472 CR for intra-band UL non-contiguous CA requirement**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0389 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008208 Non-contiguous ULCA MPR and Requirements**

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

**Discussion:**

.

**Decision: Noted.**

##### 6.13.1.5 Switching period between case 1 and case 2 [NR\_RF\_FR1]

**R4-2008309           Email discussion summary for [95e][119] NR\_RF\_FR1\_Part\_2**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Discussion:**

.

**Decision: Revised to R4-2008949 (from R4-2008309).**

**R4-2008949           Email discussion summary for [95e][119] NR\_RF\_FR1\_Part\_2**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Discussion:**

.

**Decision: Return to.**

**R4-2008476           WF on Applicability of DL interruption for Tx switching**

*Type: others For: Approval*

*Source: China Telecom*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006032 Remaining issues for Tx switching between two uplink carriers**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Discussion:**

.

**Decision: Noted.**

**R4-2006033 CR to TS 38.101-1: Switching time mask between two uplink carriers in UL CA and SUL**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0293 Cat: B (Rel-16)  
  
 Source: China Telecom, ZTE, CMCC, China Unicom, KDDI*

**Discussion:**

.

**Decision: Revised to R4-2008474 (from R4-2006033).**

**R4-2008474 CR to TS 38.101-1: Switching time mask between two uplink carriers in UL CA and SUL**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0293 Cat: B (Rel-16)  
  
 Source: China Telecom, ZTE, CMCC, China Unicom, KDDI*

**Discussion:**

.

**Decision: Return to.**

**R4-2006034 CR to TS 38.101-3: Switching time mask between two uplink carriers in EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0223 Cat: B (Rel-16)  
  
 Source: China Telecom, ZTE, CMCC, China Unicom, KDDI*

**Discussion:**

.

**Decision: Revised to R4-2008475 (from R4-2006034).**

**R4-2008475 CR to TS 38.101-3: Switching time mask between two uplink carriers in EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0223 Cat: B (Rel-16)  
  
 Source: China Telecom, ZTE, CMCC, China Unicom, KDDI*

**Discussion:**

.

**Decision: Return to.**

**R4-2006290 Requirements for suppporting Tx switching between two uplink carriers in UL CA and SUL**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0306 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006291 Requirements for suppporting Tx switching between two uplink carriers in EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0230 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006364 Views on Tx diversity and Tx carrier switching**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006513 Switching between case 1 and case 2 for two NR FR1 carriers**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2006514 CR to TS 38.101-1: Time mask requirements for switching between 1Tx and 2Tx transmissions for inter-band UL CA and SUL case**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0314 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006515 CR to TS 38.101-3: Time mask requirements for switching between 1Tx and 2Tx transmissions for inter-band EN-DC without SUL**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0246 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006804 Requirements for switching between case1 and case2**

*Type: discussion For: Discussion  
 Source: CMCC*

**Discussion:**

.

**Decision: Noted.**

**R4-2006943 Resolving remaining issues for UE switching between 1Tx carrier and 2Tx carrier**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2006944 Clarification on 2Tx carrier for UE switching between 1Tx carrier and 2Tx carrier**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2006945 CR to 38101-1 on switching between 1Tx carrier and 2Tx carrier**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0328 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006946 CR to 38101-3 on switching between 1Tx carrier and 2Tx carrier**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0263 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2007080 Clarification on the max Power between case1 and case2**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

##### 6.13.1.6 Transient period capability [NR\_RF\_FR1]

**R4-2008310           Email discussion summary for [95e][120] NR\_RF\_FR1\_Part\_3**

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

**Discussion:**

.

**Decision: Revised to R4-2008950 (from R4-2008310).**

**R4-2008950           Email discussion summary for [95e][120] NR\_RF\_FR1\_Part\_3**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008477           WF on feasibility of testing the transient periods**

*Type: others For: Approval*

*Source: CMCC*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2007132 Transient Period Capability in NR using existing window definitions**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Qualcomm Incorporated, Verizon, Dish Network, Ericsson, CMCC, Keysight Technologies, Nokia, Nokia Shanghai Bell, AT&T, ZTE, Vodafone, Orange, T-Mobile USA, Deutsche Telekom, Telecom Italia, CHTTL, China Telecom, SGS Wireless, Interdigital*

**Discussion:**

.

**Decision: Revised to R4-2008478 (from R4-2007132).**

**R4-2008478 Transient Period Capability in NR using existing window definitions**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Qualcomm Incorporated, Verizon, Dish Network, Ericsson, CMCC, Keysight Technologies, Nokia, Nokia Shanghai Bell, AT&T, ZTE, Vodafone, Orange, T-Mobile USA, Deutsche Telekom, Telecom Italia, CHTTL, China Telecom, SGS Wireless, Interdigital*

**Discussion:**

.

**Decision: Return to.**

**R4-2007515 UE transient time capability**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution addresses the exhaustive list of open issues raised in last RAN4 e-meeting to conclude on testability of the transient capability

**Discussion:**

.

**Decision: Noted.**

**R4-2008152 On transient period UE capability**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 6.13.1.7 Time masks for ULSUP-TDM in case of UL timing misalignment [NR\_RF\_FR1]

**R4-2008245 Further discussion on time masks for ULSUP in R16**

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

**Abstract:**

In this contribution, ULSUP time mask is discussed.

**Discussion:**

.

**Decision: Noted.**

**R4-2008246 CR to 38.101-3 on time masks for ULSUP in R16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0290 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

CR for update the condition for ULSUP time mask requirement.

**Discussion:**

.

**Decision: Return to.**

### 6.14 NR RF requirement enhancements for frequency range 2 (FR2) [NR\_RF\_FR2\_req\_enh]

#### 6.14.1 RF core requirements [NR\_RF\_FR2\_req\_enh]

6.14.1.1 FR2 MPE [NR\_RF\_FR2\_req\_enh]

**R4-2008311           Email discussion summary for [95e][121] NR\_RF\_FR2\_req\_enh\_Part\_1**

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

**Discussion:**

.

**Decision: Revised to R4-2008951 (from R4-2008311).**

**R4-2008951           Email discussion summary for [95e][121] NR\_RF\_FR2\_req\_enh\_Part\_1**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008479           WF on MPE enhancements**

*Type: others For: Approval*

*Source: OPPO*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006311 Remaining issues on P-MPR reporting**

*Type: other For: Discussion  
 Source: Sony, Ericsson*

**Discussion:**

.

**Decision: Noted.**

**R4-2006332 Further considerations on the uplink duty cycle enhancements for the MPE scenario**

*Type: discussion For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006510 UE FR2 MPE enhancements and solutions**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2006511 [Draft] LS on MPE enhancements**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2008480 (from R4-2006511).**

**R4-2008480 [Draft] LS on MPE enhancements**

*Type: LS out For: Approval  
 6581*

*to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Return to.**

**R4-2006579 Remaining details for P-MPR reporting**

*Type: other For: Approval  
 Source: InterDigital Communications*

**Discussion:**

.

**Decision: Noted.**

**R4-2006581 Introduction of P-MPR report mapping**

*Type: CR For: Agreement  
 38.133 v16.3.0 CR-0677 Cat: B (Rel-16)  
  
 Source: InterDigital Communications*

**Abstract:**

Introduction of P-MPR report mapping in 38.133

**Discussion:**

.

**Decision: Return to.**

**R4-2006735 Discussion about triggers for P-MPR reporting**

*Type: discussion For: Approval  
 Source: Futurewei*

**Discussion:**

.

**Decision: Noted.**

**R4-2006737 Discussion on enhancement of MPE in Rel-16 on FR2**

*Type: other For: Approval  
 Source: LG Electronics France*

**Discussion:**

.

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

**R4-2006996 Enhancement on FR2 MPE mitigation**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2007081 Further on MPE enhancement**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2007109 Views on remaining issues of Rel-16 FR2 MPE solution**

*Type: discussion For: Discussion  
 38.101-2 v..  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2008168 On MPE enhancement\_FR2**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 6.14.1.2 Beam Correspondence based on configured DL RS (SSB or CSI-RS) [NR\_RF\_FR2\_req\_enh]

**R4-2008312           Email discussion summary for [95e][122] NR\_RF\_FR2\_req\_enh\_Part\_2**

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

**Discussion:**

.

**Decision: Revised to R4-2008952 (from R4-2008312).**

**R4-2008952           Email discussion summary for [95e][122] NR\_RF\_FR2\_req\_enh\_Part\_2**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008481           WF on BC based on SSB**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008482           WF on BC based on CSI-RS**

*Type: others For: Approval*

*Source: Samsung*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006319 Remaining issues in beam correspondence**

*Type: other For: Discussion  
 Source: Sony, Ericsson*

**Discussion:**

.

**Decision: Noted.**

**R4-2006357 Remaining issues with beam correspondence in Rel-16**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006358 TP to TR38.831: beam correspondence enhancement**

*Type: other For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006428 Discussion on Rel-16 beam correspondence**

*Type: discussion For: Discussion  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2006429 CR to TS38.101-2 on Rel-16 beam correspondence**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0154 Cat: B (Rel-16)  
  
 Source: Samsung*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006512 FR2 Beam Correspondence enhancements**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2006564 SSB based Beam Correspondence**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2006738 Discussion on enhancement of BC in Rel-16 at FR2**

*Type: other For: Approval  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Noted.**

**R4-2006900 Views on beam correspondence enhancement based on SSB in Rel-16**

*Type: discussion For: Discussion  
 38.101-2 v..  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Noted.**

**R4-2007082 On SSB based BC**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2007083 On CSI-RS based BC**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2007283 FR2 Beam Correspondence**

*Type: discussion For: Discussion  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2008155 On beam correspondence enhancement**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008178 LS on CSI-RS only beam correspondence**

*Type: LS out For: Approval  
 to RAN1  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008205 Remaining details on SSB based beam correspondence**

*Type: discussion For: (not specified)  
 Source: Futurewei Technologies*

**Discussion:**

.

**Decision: Noted.**

##### 6.14.1.3 Intra-band non-cont DL CA for aggregated BW larger than 1400 MHz [NR\_RF\_FR2\_req\_enh]

**R4-2008313           Email discussion summary for [95e][123] NR\_RF\_FR2\_req\_enh\_Part\_3**

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

**Discussion:**

.

**Decision: Revised to R4-2008953 (from R4-2008313).**

**R4-2008953           Email discussion summary for [95e][123] NR\_RF\_FR2\_req\_enh\_Part\_3**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008487           WF on FR2 inter-band DL CA**

*Type: others For: Approval*

*Source: MediaTek*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008488           WF on FR2 Beam Squint Effect**

*Type: others For: Approval*

*Source: Sony*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006567 On understanding of CC allocations in FR2 intra-band non-contiguous DL CA**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2006631 CR to 38.101-2 on REFSENS for intra-band non-contiguous CA for FR2**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0160 Cat: B (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006632 [draft] LS to RAN2 on DL-only separation class**

*Type: LS out For: Approval  
 to RAN2  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008484 (from R4-2006632).**

**R4-2008484 [draft] LS to RAN2 on DL-only separation class**

*Type: LS out For: Approval  
 to RAN2  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006634 CR to 38.101-2 on FR2 frequency separation class enhancement**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0161 Cat: B (Rel-16)  
  
 Source: Apple Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated*

**Discussion:**

.

**Decision: Revised to R4-2008485 (from R4-2006634).**

**R4-2008485 CR to 38.101-2 on FR2 frequency separation class enhancement**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0161 Cat: B (Rel-16)  
  
 Source: Apple Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated*

**Discussion:**

.

**Decision: Return to.**

**R4-2006780 TP to TR38.831: FR2 UE architectures for DL Intra-band CA BW Enhancement**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

TP contains UE architecture study supporting the DL CA BW enhancement feature

**Discussion:**

.

**Decision: Revised to R4-2008486 (from R4-2006780).**

**R4-2008486 TP to TR38.831: FR2 UE architectures for DL Intra-band CA BW Enhancement**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

TP contains UE architecture study supporting the DL CA BW enhancement feature

**Discussion:**

.

**Decision: Return to.**

**R4-2008154 On intra-band NC DL CA\_FR2**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008177 CR for 38.101-2 separation class for Rel-16**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0203 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008483 (from R4-2008177).**

**R4-2008483 CR for 38.101-2 separation class for Rel-16**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0203 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

##### 6.14.1.4 Intra-band non-contiguous UL CA [NR\_RF\_FR2\_req\_enh]

**R4-2008314           Email discussion summary for [95e][124] NR\_RF\_FR2\_req\_enh\_Part\_4**

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

**Discussion:**

.

**Decision: Revised to R4-2008954 (from R4-2008314).**

**R4-2008954           Email discussion summary for [95e][124] NR\_RF\_FR2\_req\_enh\_Part\_4**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008489           WF on CA MPR table format for FR2 NC UL CA**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006361 Remaining issues with non-simultaneous UL for non-contiguous UL CA in FR2**

*Type: discussion For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006486 FR2 intra-band non-contiguous UL CA feature**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0156 Cat: B (Rel-16)  
  
 Source: Nokia, Qualcomm Inc. Ericsson*

**Discussion:**

.

**Decision: Revised to R4-2008890 (from R4-2006486).**

**R4-2008890 FR2 intra-band non-contiguous UL CA feature**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0156 Cat: B (Rel-16)  
  
 Source: Nokia, Qualcomm Inc. Ericsson*

**Discussion:**

.

**Decision: Return to.**

**R4-2006791 On using Rel-15 CA MPR table format for FR2 NC UL CA**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

We propose MPR for NC UL CA operation

**Discussion:**

.

**Decision: Noted.**

##### 6.14.1.5 Inter-band DL CA [NR\_RF\_FR2\_req\_enh]

**R4-2006213 On common beam management from baseband perspective**

*Type: discussion For: Discussion  
 Source: Apple*

**Discussion:**

.

**Decision: Noted.**

**R4-2006320 Inter-band DL CA in FR2: CBM/IBM capability and associated spherical coverage EIS tests**

*Type: other For: Discussion  
 Source: Sony, Ericsson*

**Discussion:**

.

**Decision: Noted.**

**R4-2006430 on EIS relaxation framework and PSD difference in FR2 inter-band CA**

*Type: discussion For: Discussion  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2006565 Remaining issues on FR2 inter-band DL CA**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2006591 FR2 Inter-band CA**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

common and independent beam management is discussed

**Discussion:**

.

**Decision: Noted.**

**R4-2006592 TP to TR 38.831 on FR2 inter-band CA**

*Type: pCR For: Approval  
 38.831 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

TP on inter-band CA requirement

**Discussion:**

.

**Decision: Noted.**

**R4-2006633 On common beam management assumptions and PSD difference in FR2 CA**

*Type: discussion For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006829 FR2 inter-band DL CA requirements**

*Type: other For: Approval  
 38.101-2 v..  
 Source: MediaTek Inc.*

**Abstract:**

In this contribution, we share our views on how to distinguish CBM and IBM for band pairs and how common spherical coverage can be specified and tested in conjunction with REFSENS and EIS spherical coverage requirements under inter-band DL CA operation.

**Discussion:**

.

**Decision: Noted.**

**R4-2008051 Inter-band CA remaining open requirements**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2008052 DraftCR on Introduction of inter-band CA to 38.101-2**

*Type: draftCR For: Endorsement  
 38.101-2 v16.3.1  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008056 FR2 inter-band CA LB+HB**

*Type: other For: (not specified)  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Noted.**

**R4-2008166 On inter band DL CA\_FR2**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 6.14.1.6 Improvement of UE MPR [NR\_RF\_FR2\_req\_enh]

**R4-2006485 FR2 new MPR and modifiedmpr**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0155 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Return to.**

**R4-2008891           FR2 new MPR and modifiedmpr**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR- Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006782 FR2 UE EIRP increase with IBE relaxation**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

For Rel-16, it was agreed that an FR2 UE’s transmit power capability could be increased if IBE requirements were relaxed. In this contribution we present a proposal for how power boost (IBE) can be incorporated into the standard.

**Discussion:**

.

**Decision: Noted.**

**R4-2006783 LS on UL power boost mode and IBE relaxation**

*Type: LS out For: Approval  
 to RAN2  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Return to.**

**R4-2006784 CR to 38.101-2: FR2 UE EIRP increase with IBE relaxation**

*Type: CR For: Agreement  
 38.101-2 v16.3.0 CR-0166 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

For Rel-16, it was agreed that an FR2 UE’s transmit power capability could be increased if IBE requirements were relaxed. In this contribution we present a proposal for how power boost (IBE) can be incorporated into the standard.

**Discussion:**

.

**Decision: Return to.**

##### 6.14.1.7 Improvement of spherical coverage requirements for PC3 [NR\_RF\_FR2\_req\_enh]

**R4-2008315           Email discussion summary for [95e][125] NR\_RF\_FR2\_req\_enh\_Part\_5**

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

**Discussion:**

.

**Decision: Revised to R4-2008955 (from R4-2008315).**

**R4-2008955           Email discussion summary for [95e][125] NR\_RF\_FR2\_req\_enh\_Part\_5**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008892           WF on spherical coverage improvements and study results**

*Type: others For: Approval*

*Source: Samsung*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006312 Further view on spherical coverage improvements for Rel-16**

*Type: discussion For: Approval  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2006359 Views on PC3 spherical coverage requirements in Rel-16 and beyond**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2007276 Further views on improvement to spherical coverage requirements for PC3**

*Type: other For: Discussion  
 Source: Sony*

**Discussion:**

.

**Decision: Noted.**

##### 6.14.1.8 Multiband relaxation framework enhancement [NR\_RF\_FR2\_req\_enh]

**R4-2006313 CR to 38.101-2: Revision to Multiband Relaxations**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0148 Cat: F (Rel-16)  
  
 Source: Samsung*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006328 [draft] LS response on Multiband relaxation for FR2**

*Type: LS out For: Approval  
 to TSG RAN WG5  
 Source: Sony, Ericsson, Samsung, Qualcomm*

**Discussion:**

.

**Decision: Noted.**

**R4-2006350 Views on MBR enhancement for FR2**

*Type: discussion For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006351 [draft] LS response on Multiband relaxation for FR2**

*Type: LS out For: Approval  
 to RAN5  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006352 CR to 38.101-2 on correction of the FR2 multi-band requirement framework**

*Type: CR For: Agreement  
 38.101-2 v15.9.0 CR-0149 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006353 CR to 38.307 on clarification of the FR2 multi-band requirement framework**

*Type: CR For: Agreement  
 38.307 v16.2.0 CR-0018 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006354 TP to TR38.831: multi-band relaxation framework enhancement**

*Type: other For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006365 CR to 38.101-2 on correction of the FR2 multi-band requirement framework**

*Type: draftCR For: Endorsement  
 38.101-2 v15.9.1  
 Source: Sony, Ericsson, Samsung, Qualcomm*

**Abstract:**

Introduce a maximum cap on to the per-band relaxation factors, such that ?MBP,n = 0.75 dB and ?MBS,n = 0.75 dB

**Discussion:**

.

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

**R4-2006580 CR to 38.101-2 on correction of the FR2 multi-band requirement framework**

*Type: CR For: Agreement  
 38.101-2 v15.9.1 CR-0158 Cat: F (Rel-15)  
  
 Source: Sony, Ericsson, Samsung, Qualcomm*

**Abstract:**

Introduce a maximum cap on to the per-band relaxation factors, such that ?MBP,n = 0.75 dB and ?MBS,n = 0.75 dB

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006707 MBR framework applicability**

*Type: discussion For: Approval  
 Source: MediaTek Beijing Inc.*

**Abstract:**

Proposals for MBR framework applicability

**Discussion:**

.

**Decision: Noted.**

##### 6.14.1.9 FR2 Beam Squint [NR\_RF\_FR2\_req\_enh]

**R4-2006327 Analysis on EIS degradation due to larger frequency separation for PC3 Ues**

*Type: other For: Discussion  
 Source: Sony, Ericsson*

**Discussion:**

.

**Decision: Noted.**

**R4-2006781 Beam squint analysis for FR2 UEs**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

We discuss how beam squint impacts compliance as frequency separation increases

**Discussion:**

.

**Decision: Noted.**

**R4-2006842 Views on radiative degradation mechanisms for larger frequency separation**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

### 6.21 R16 NR maintenance [WI code or TEI16]

#### 6.21.1 BS RF [WI code or TEI16]

#### 6.21.2 UE RF [WI code or TEI16]

**R4-2008316           Email discussion summary for [95e][126] NR\_R16\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Dish Network)*

**Discussion:**

.

**Decision: Revised to R4-2008956 (from R4-2008316).**

**R4-2008956           Email discussion summary for [95e][126] NR\_R16\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Dish Network)*

**Discussion:**

.

**Decision: Return to.**

**R4-2008895           WF on NR bands to UL MIMO**

*Type: others For: Approval*

*Source: Samsung*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006497 Proposed response to RAN2 LS on asymmetric channel bandwidths**

*Type: other For: Approval  
 Source: Nokia*

**Discussion:**

.

**Decision: Noted.**

**R4-2006617 Update 4Rx Requirement for Band n30**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0315 Cat: F (Rel-16)  
  
 Source: AT&T, Nokia, Ericsson*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006744 CR to 38.101-2 to correct Link and Meas Angles**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0164 Cat: A (Rel-16)  
  
 Source: Keysight Technologies UK Ltd*

**Abstract:**

Several link and measurement angle in the requirements definitions needed to be corrected and/or clarified

**Discussion:**

.

**Decision: Return to.**

**R4-2006759 CR to 38.101-1: Introduce an operating band list and NR bands to UL MIMO**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0320 Cat: B (Rel-16)  
  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2008894 (from R4-2006759).**

**R4-2008894 CR to 38.101-1: Introduce an operating band list and NR bands to UL MIMO**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0320 Cat: B (Rel-16)  
  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Return to.**

**R4-2006938 CR on blocking requirements for n91 n92 n93 and n94**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0325 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008896 (from R4-2006938).**

**R4-2008896 CR on blocking requirements for n91 n92 n93 and n94**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0325 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2006947 Endorsed CR on default AMPR signaling for n91 n92 n93 and n94**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0329 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2007334 Reply LS on asymmetric channel bandwidths**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008893 (from R4-2007334).**

**R4-2008893 Reply LS on asymmetric channel bandwidths**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008086 CR on introduce delta-MPR for inter-band CA in band n28 and review value with brackets**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0373 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008114 CR for Band 53 NS\_45 requirement and OOB blocking**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5639 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Align B53 requirements with n53 requirements

**Discussion:**

.

**Decision: Agreed.**

**R4-2008118 UE perspective of Band n77 for US C-band**

*Type: discussion For: Approval  
 Source: Qualcomm Incorporated, Verizon, T-Mobile USA, AT&T, Apple*

**Discussion:**

.

**Decision: Noted.**

**R4-2008119 Addition of UE coexistence between US bands and NR Band n77**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5640 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Verizon, T-Mobile USA, AT&T, Apple, Ericsson*

**Discussion:**

.

**Decision: Revised to R4-2008897 (from R4-2008119).**

**R4-2008897 Addition of UE coexistence between US bands and NR Band n77**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5640 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Verizon, T-Mobile USA, AT&T, Apple, Ericsson*

**Discussion:**

.

**Decision: Return to.**

**R4-2008120 Addition of mutual UE coexistence between US bands and NR Band n77**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0380 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Verizon, T-Mobile USA, AT&T, Apple, Ericsson*

**Discussion:**

.

**Decision: Revised to R4-2008898 (from R4-2008120).**

**R4-2008898 Addition of mutual UE coexistence between US bands and NR Band n77**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0380 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Verizon, T-Mobile USA, AT&T, Apple, Ericsson*

**Discussion:**

.

**Decision: Return to.**

**R4-2008121 Addition of UE coexistence between US DC combinations and NR Band n77**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0282 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Verizon, T-Mobile USA, AT&T, Apple, Ericsson*

**Discussion:**

.

**Decision: Revised to R4-2008899 (from R4-2008121).**

**R4-2008899 Addition of UE coexistence between US DC combinations and NR Band n77**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0282 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Verizon, T-Mobile USA, AT&T, Apple, Ericsson*

**Discussion:**

.

**Decision: Return to.**

**R4-2008176 CR for power class fallback enhancement**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0392 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008267 Further discussion on linear method for power class fall back optimization**

*Type: discussion For: Discussion  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2008225 CR for TS 38.101-1 UE co-existence correction (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0394 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008227 CR for 38.101-1 RFC corrections (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0396 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006347 CR Coexistence cleanup for 38101-1 Rel16**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0307 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006482 Usage of n77 in US C-band REL-15**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-0312 Cat: F (Rel-15)  
  
 Source: Nokia*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006483 Usage of n77 in US C-band REL-16**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0313 Cat: F (Rel-16)  
  
 Source: Nokia*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006484 C-band co-existence aspects.**

*Type: other For: Approval  
 Source: Nokia*

**Discussion:**

.

**Decision: Noted.**

**R4-2006624 Band n77 usage in the US**

*Type: discussion For: Approval  
 Source: Apple*

**Abstract:**

This paper discusses how to implement n77 for the US

**Discussion:**

.

**Decision: Noted.**

**R4-2006242 CR for TS38.101-3, Aligned IE RF-Parameters name of maxUplinkDutyCycle with RAN2**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0228 Cat: F (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Agreed.**

## 7 UE feature list

**R4-2008317           Email discussion summary for [95e][127] R16\_UE\_ feature**

*Type: other For: Information  
 Source: Moderator (NTT DOCOMO)*

**Discussion:**

.

**Decision: Revised to R4-2008957 (from R4-2008317).**

**R4-2008957           Email discussion summary for [95e][127] R16\_UE\_ feature**

*Type: other For: Information  
 Source: Moderator (NTT DOCOMO)*

**Discussion:**

.

**Decision: Return to.**

**R4-2008901           LS on Rel-16 RAN4 UE features lists for NR and LTE**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: NTT DOCOMO, INC*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006348 Further views on NR UE feature list for FR1**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006349 Further views on NR UE feature list for FR2**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006901 RAN4 UE features list for Rel-16**

*Type: discussion For: Information  
 Source: NTT DOCOMO, INC.*

**Abstract:**

RAN4 UE feature list in Rel-16.

**Discussion:**

.

**Decision: Revised to R4-2008900 (from R4-2006901).**

**R4-2008900 RAN4 UE features list for Rel-16**

*Type: discussion For: Information  
 Source: NTT DOCOMO, INC.*

**Abstract:**

RAN4 UE feature list in Rel-16.

**Discussion:**

.

**Decision: Return to.**

**R4-2007637 Views on Rel-16 NR/LTE UE feature list**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2008251 On Rel-16 feature list**

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

**Abstract:**

Provide our view on feature list.

**Discussion:**

.

**Decision: Withdrawn.**

## 8 Rel-16 spectrum related Work Items for NR

**R4-2007636 CR Rel-16 for editorial corrections TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0279 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Removing duplicate combinations

**Discussion:**

.

**Decision: Agreed.**

### 8.1 NR intra band Carrier Aggregation for xCC DL/yCC UL including contiguous and non-contiguous spectrum (x>=y) [NR\_CA\_R16\_intra]

**R4-2008318           Email discussion summary for [95e][128] NR\_Baskets\_Part\_1**

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

**Discussion:**

.

**Decision: Noted.**

#### 8.1.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R16\_intra-Core /Perf]

**R4-2006045 TR 38.716-01-01 v0.12.0 Rel-16 NR Intra-band**

*Type: draft TR For: Agreement  
 38.716-01-01 v0.12.0  
 Source: Ericsson*

**Abstract:**

TR 38.716-01-01 v0.10.0 Rel-16 NR Intra-band

**Discussion:**

.

**Decision: To be email approved**

**R4-2007597 Revised WID NR Intra-band Rel-16**

*Type: WID revised For: Decision  
 Source: Ericsson*

**Abstract:**

Revised WID NR Intra-band Rel-16

**Discussion:**

.

**Decision: To be email approved**

**R4-2007605 CR introduction completed band combinations 38.716-01-01 -> 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0360 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.716-01-01 -> 38.101-1

**Discussion:**

.

**Decision: To be email approved**

**R4-2007606 CR introduction completed band combinations 38.716-01-01 -> 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v16.3.0 CR-0190 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.716-01-01 -> 38.101-2

**Discussion:**

.

**Decision: To be email approved**

#### 8.1.2 UE RF for FR1 [NR\_CA\_R16\_intra-Core]

**R4-2006066 Corrections to CA n48**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0294 Cat: F (Rel-16)  
  
 Source: Dish Network*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006343 CR Coexistence cleanup for 38101-3 Rel16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0232 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2006425 TP for TR 38.716-01-01 CA\_n77(2A)\_UL\_n77(2A)**

*Type: pCR For: Approval  
 38.716-01-01 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006426 TP for TR 38.716-01-01 CA\_n78(2A)\_UL\_n78(2A)**

*Type: pCR For: Approval  
 38.716-01-01 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006492 CA\_n48B A-MPR**

*Type: other For: Approval  
 Source: Nokia*

**Discussion:**

.

**Decision: Noted.**

**R4-2008038 DraftCR for TS 38.101-1 intra-band UL contiguous CA combinations CA\_n79C**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon, CMCC*

**Discussion:**

.

**Decision: To be email approved**

#### 8.1.3 UE RF for FR2 [NR\_CA\_R16\_intra-Core]

**R4-2006704 CR to 38.101-2: Introduce mmWave intra-band uplink CA configurations**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0162 Cat: B (Rel-16)  
  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2008381 (from R4-2006704).**

**R4-2008381 CR to 38.101-2: Introduce mmWave intra-band uplink CA configurations**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0162 Cat: B (Rel-16)  
  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006708 CR to 38.101-2: Conrrection of aggregated bandwidth for CA\_n261(2A-G) in Table 5.5A.2-2**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0163 Cat: F (Rel-16)  
  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006830 CR for TS 38.101-2: Intra-band non-contiguous CA configuration clarifications**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0175 Cat: F (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

### 8.2 NR inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1, 2) [NR\_CADC\_R16\_2BDL\_xBUL]

**R4-2008319           Email discussion summary for [95e][129] NR\_Baskets\_Part\_2**

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

**Discussion:**

.

**Decision: Noted.**

#### 8.2.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R16\_2BDL\_xBUL-Core/Perf]

**R4-2006872 TR 38.716-02-00 v120**

*Type: draft TR For: Agreement  
 38.716-02-00 v1.2.0  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007019 Revised WID on Rel-16 NR Inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1,2)**

*Type: WID revised For: Decision  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007020 CR to reflect the completed NR inter band CA DC combinations for 2 bands DL with up to 2 bands UL into Rel16 TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0341 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007021 CR to reflect the completed NR inter band CA DC combinations for 2 bands DL with up to 2 bands UL into Rel16 TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0268 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: To be email approved**

#### 8.2.2 NR inter band CA without any FR2 band(s) [NR\_CADC\_R16\_2BDL\_xBUL-Core]

**R4-2006067 Corrections to n29-n66 CA combinations**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0295 Cat: F (Rel-16)  
  
 Source: Dish Network*

**Discussion:**

Chair: To be included in Rapporteur CR for 38.101-1, hence the decision of “Endorsed” instead of “Agreed”

**Decision: Endorsed.**

**R4-2006298 Draft CR on introducing CA\_n41C-n79A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: CATT*

**Discussion:**

.

**Decision: Revised to R4-2008349 (from R4-2006298).**

**R4-2008349 Draft CR on introducing CA\_n41C-n79A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: CATT*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006393 darft CR for 38.101-1 to introduce UL CA configuration for inter-band NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Revised to R4-2008350 (from R4-2006393).**

**R4-2008350 darft CR for 38.101-1 to introduce UL CA configuration for inter-band NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006606 TP to TR 38.716-02-00 for CA\_n5-n66 with dual UL**

*Type: pCR For: Approval  
 38.716-02-00 v1.1.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Revised to R4-2008351 (from R4-2006606).**

**R4-2008351 TP to TR 38.716-02-00 for CA\_n5-n66 with dual UL**

*Type: pCR For: Approval  
 38.716-02-00 v1.1.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Approved.**

**R4-2006690 TP for TR 38.716-02-00: CA\_n2-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2008352 (from R4-2006690).**

**R4-2008352 TP for TR 38.716-02-00: CA\_n2-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2006693 TP for TR 38.716-02-00: CA\_n5-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2008353 (from R4-2006693).**

**R4-2008353 TP for TR 38.716-02-00: CA\_n5-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2006694 TP for TR 38.716-02-00: CA\_n66-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2008354 (from R4-2006694).**

**R4-2008354 TP for TR 38.716-02-00: CA\_n66-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2006748 CR to add simultaneous RXTX capability for CA\_n41-n79**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0318 Cat: F (Rel-16)  
  
 Source: CMCC, ZTE*

**Discussion:**

.

**Decision: Revised to R4-2008355 (from R4-2006748).**

**R4-2008355 CR to add simultaneous RXTX capability for CA\_n41-n79**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0318 Cat: F (Rel-16)  
  
 Source: CMCC, ZTE*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006937 TP to TR 38.716-02-00 CA\_n78(2A)-n92A**

*Type: pCR For: Approval  
 38.716-02-00 v1.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008356 (from R4-2006937).**

**R4-2008356 TP to TR 38.716-02-00 CA\_n78(2A)-n92A**

*Type: pCR For: Approval  
 38.716-02-00 v1.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2007009 Draft CR to TS38.101-1: CA\_n28A-n75A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2007010 Draft CR to TS 38.101-1: Updated the MSD values for NR CA n3-n41**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2007011 TP for TR 38.716-02-00:CA\_n38A-n78A**

*Type: pCR For: Approval  
 38.716-02-00 v1.1.0  
 Source: ZTE Corporation, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Revised to R4-2008357 (from R4-2007011).**

**R4-2008357 TP for TR 38.716-02-00:CA\_n38A-n78A**

*Type: pCR For: Approval  
 38.716-02-00 v1.1.0  
 Source: ZTE Corporation, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Approved.**

**R4-2007326 TP to TR 38.716-02-00 for CA\_n38-n78**

*Type: pCR For: Approval  
 38.716-02-00 v1.1.0  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Noted.**

**R4-2007624 TP for TR 38.716-02-00 to include CA\_n5-n7**

*Type: pCR For: Approval  
 38.716-03-01 v0.7.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 38.716-02-00 to include CA\_n5-n7

**Discussion:**

.

**Decision: Approved.**

**R4-2007625 TP for TR 38.716-02-00 to include CA\_n3-n7**

*Type: pCR For: Approval  
 38.716-03-01 v0.7.0  
 Source: Ericsson, Telstra, BT plc*

**Abstract:**

TP for TR 38.716-02-00 to include CA\_n3-n7

**Discussion:**

.

**Decision: Revised to R4-2008358 (from R4-2007625).**

**R4-2008358 TP for TR 38.716-02-00 to include CA\_n3-n7**

*Type: pCR For: Approval  
 38.716-03-01 v0.7.0  
 Source: Ericsson, Telstra, BT plc*

**Abstract:**

TP for TR 38.716-02-00 to include CA\_n3-n7

**Discussion:**

.

**Decision: Approved.**

**R4-2007626 draft Rel-16 CR to 38.101-1 to add CA\_n1A-n7B, CA\_n7B-n28A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Ericsson, Telstra*

**Abstract:**

draft Rel-16 CR to 38.101-1 to add CA\_n1A-n7B, CA\_n7B-n28A

**Discussion:**

.

**Decision: Endorsed.**

**R4-2008036 Draft CR for 38.101-1 to add configuration CA\_n75A-n78(2A) and simplify the REFSENS for inter band CA with SDL**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon,Etisalat*

**Discussion:**

.

**Decision: Revised to R4-2008359 (from R4-2008036).**

**R4-2008359 Draft CR for 38.101-1 to add configuration CA\_n75A-n78(2A) and simplify the REFSENS for inter band CA with SDL**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon,Etisalat*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2008089 CR for 38.101-1: to add some missing sub-clause title for NR inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0374 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008360           CR for 38.101-1: to add some missing sub-clause title for NR inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v15.9.0 CR-* *0403 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

**Decision: Agreed.**

**R4-2008361           CR for 38.101-1: to add some missing sub-clause title for NR inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-* *0404 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

**Decision: Agreed.**

#### 8.2.3 NR inter band CA with at least one FR2 band [NR\_CADC\_R16\_2BDL\_xBUL-Core]

**R4-2006622 Draft CR for 38.101-3: Support of n78C in the DC\_n78-n257 and CA\_n78-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SK Telecom*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2006673 Draft CR for TS 38.101-3: Support of DC\_n3-n257 and DC\_n28-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Revised to R4-2008362 (from R4-2006673).**

**R4-2008362 Draft CR for TS 38.101-3: Support of DC\_n3-n257 and DC\_n28-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2006697 TP for TR 38.716-02-00: CA\_n77-n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2008363 (from R4-2006697).**

**R4-2008363 TP for TR 38.716-02-00: CA\_n77-n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

### 8.3 EN-DC of 1 LTE band and 1 NR band [DC\_R16\_1BLTE\_1BNR\_2DL2UL]

**R4-2008135 DC\_12\_n71 Single Uplink Operation**

*Type: discussion For: Approval  
 38.101-3 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

.

**Decision: Noted.**

#### 8.3.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_1BLTE\_1BNR\_2DL2UL-Core/Perf]

**R4-2006845 TR 37.716-11-11 v.1.3.0 Rel.16 1 LTE band + 1 NR band EN-DC**

*Type: draft TR For: Agreement  
 37.716-11-11 v1.1.0  
 Source: CHTTL*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006890 Big CR on introduction of completed EN-DC of 1 band LTE and 1 band NR**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0255 Cat: B (Rel-16)  
  
 Source: CHTTL*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006895 Revised WID on EN-DC for 2 bands DL with 2 bands UL (1 LTE band + 1 NR band)**

*Type: WID revised For: Decision  
 Source: CHTTL*

**Discussion:**

.

**Decision: To be email approved**

#### 8.3.2 EN-DC without FR2 band [DC\_R16\_1BLTE\_1BNR\_2DL2UL-Core]

**R4-2006142 TP for TR 37.716-11-11: DC\_48A-48A\_n71A and DC\_48A-48A-48A\_n71A**

*Type: discussion For: Approval  
 Source: CableLabs, Comcast*

**Discussion:**

.

**Decision: Approved.**

**R4-2006456 CR for TS 38.101-3: Adding missing MSD due to UL harmonic for DC\_28\_n50**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0241 Cat: F (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006618 Draft CR for 38.101-3: Support of n78C in DC\_5\_n78, and DC\_7\_n78**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SK Telecom*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2006686 TP update for TR 37.716-11-11: DC\_42\_n28**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006687 TP update for TR 37.716-11-11: DC\_11\_n28**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: SoftBank Corp., LG Electronics Inc.*

**Discussion:**

.

**Decision: Revised to R4-2008341 (from R4-2006687).**

**R4-2008341 TP update for TR 37.716-11-11: DC\_11\_n28**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: SoftBank Corp., LG Electronics Inc.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006699 TP for TR 37.716-11-11: DC\_13\_n2**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2006877 Draft CR to 38.101-3 on the correction of DC\_48D\_n48A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: Google Inc.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2006926 TP for TR 37.716-11-11: some corrections for TR 37.716-11-11**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: CHTTL*

**Discussion:**

.

**Decision: Approved.**

**R4-2006952 Correction to EN-DC coexistence requirements**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0264 Cat: F (Rel-16)  
  
 Source: Rohde & Schwarz*

**Discussion:**

.

**Decision: Agreed.**

**R4-2007012 Draft CR to TS 38.101-3: Editorial corrections on the MSD values due to cross bands isolation for DC\_1-n3 and DC\_3-n41**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2007170 TP for 37.716-11-11 to introduce DC\_5\_n5**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Revised to R4-2008342 (from R4-2007170).**

**R4-2008342 TP for 37.716-11-11 to introduce DC\_5\_n5**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2007611 TP for TR 37.716-11-11 to include 2\_n2**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Ericsson, AT&T, Nokia, Verizon*

**Abstract:**

TP for TR 37.716-11-11 to include 2\_n2

**Discussion:**

.

**Decision: Revised to R4-2008343 (from R4-2007611).**

**R4-2008343 TP for TR 37.716-11-11 to include 2\_n2**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Ericsson, AT&T, Nokia, Verizon*

**Abstract:**

TP for TR 37.716-11-11 to include 2\_n2

**Discussion:**

.

**Decision: Approved.**

**R4-2007612 TP for TR 37.716-11-11 to include 14\_n66**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Ericsson, AT&T*

**Abstract:**

TP for TR 37.716-11-11 to include 14\_n66

**Discussion:**

.

**Decision: Approved.**

**R4-2007613 TP for TR 37.716-11-11 to include 14\_n2**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Ericsson, AT&T*

**Abstract:**

TP for TR 37.716-11-11 to include 14\_n2

**Discussion:**

.

**Decision: Approved.**

**R4-2007623 TP for TR 37.716-11-11 to include DC\_12\_n71**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.716-11-11 to include DC\_12\_n71

**Discussion:**

.

**Decision: Noted.**

**R4-2008344 TP for TR 37.716-11-11 to include DC\_12\_n71**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.716-11-11 to include DC\_12\_n71

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008016 TP for TR 37.716-11-11: DC\_7A\_n20A**

*Type: pCR For: Approval  
 37.716-11-11 v1.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008376           TP for TR 37.716-11-11 to correct DC\_13\_n5**

*Type: pCR For: Approval  
 37.716-11-11 0.9.0*

*Source: Ericsson*

**Abstract:**

**Decision:                    Return to.**

#### 8.3.3 EN-DC with FR2 band [DC\_R16\_1BLTE\_1BNR\_2DL2UL-Core]

### 8.4 EN-DC of 2 LTE band and 1 NR band [DC\_R16\_2BLTE\_1BNR\_3DL2UL]

#### 8.4.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_2BLTE\_1BNR\_3DL2UL-Core/Perf]

**R4-2007337 TR 37.716-21-11 v0.11.0**

*Type: draft TR For: Agreement  
 37.716-21-11 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007338 Revised WID: Dual Connectivity (EN-DC) of 2 bands LTE inter-band CA (2DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID revised For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007339 CR on introduction of completed EN-DC of 2 bands LTE and 1 band NR from RAN4#94bis-e and RAN4#95-e into TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0275 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: To be email approved**

#### 8.4.2 EN-DC without FR2 band [DC\_R16\_2BLTE\_1BNR\_3DL2UL-Core]

**R4-2006395 TP for TR 37.716-21-11 DC\_3-41\_n28 update**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI, LGE*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2006498 TP for TR 37.716-21-11: DC\_2-29\_n66 and DC\_2-2-29\_n66**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006499 TP for TR 37.716-21-11: DC\_29-66\_n2 and DC\_29-66-66\_n2**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006619 Draft CR for 38.101-3: Support of n78C in DC\_1-5\_n78, DC\_1-7\_n78, DC\_3-5\_n78, DC\_3-7\_n78, and DC\_5-7\_n78**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SK Telecom*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2006672 Draft CR for TS 38.101-3: Support of n77(2A) in DC\_1-42\_n77, DC\_3-42\_n77 and DC\_8-42\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2006679 TP for TR 37.716-21-11: EN-DC\_1-42\_n28**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006681 TP for TR 37.716-21-11: EN-DC\_3-42\_n28**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006682 TP for TR 37.716-21-11: EN-DC\_8-42\_n28**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Revised to R4-2008340 (from R4-2006682).**

**R4-2008340 TP for TR 37.716-21-11: EN-DC\_8-42\_n28**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006689 TP update for TR 37.716-21-11: DC\_1-11\_n3**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: SoftBank Corp., LG Electronics Inc.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006934 TP to TR 37.716-21-11 DC\_3C-20A\_n41A**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2007614 TP for TR 37.716-21-11 to include 2-14\_n66**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Ericsson, AT&T*

**Abstract:**

TP for TR 37.716-21-11 to include 2-14\_n66

**Discussion:**

.

**Decision: Approved.**

**R4-2007615 TP for TR 37.716-21-11 to include 2-14\_n2**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Ericsson, AT&T*

**Abstract:**

TP for TR 37.716-21-11 to include 2-14\_n2

**Discussion:**

.

**Decision: Approved.**

**R4-2007616 TP for TR 37.716-21-11 to include 14-66\_n2**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Ericsson, AT&T*

**Abstract:**

TP for TR 37.716-21-11 to include 14-66\_n2

**Discussion:**

.

**Decision: Approved.**

**R4-2007617 TP for TR 37.716-21-11 to include 46-66\_n5**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Ericsson, AT&T*

**Abstract:**

TP for TR 37.716-21-11 to include 46-66\_n5

**Discussion:**

.

**Decision: Approved.**

**R4-2007618 TP for TR 37.716-21-11 to include 14-66\_n66**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Ericsson, AT&T*

**Abstract:**

TP for TR 37.716-21-11 to include 14-66\_n66

**Discussion:**

.

**Decision: Approved.**

**R4-2008017 TP for TR 37.716-21-11: DC\_3A-(n)41AA\DC\_3A-(n)41CA\DC\_3A-(n)41DA**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Huawei, HiSilicon,Etisalat*

**Discussion:**

.

**Decision: Revised to R4-2008345 (from R4-2008017).**

**R4-2008345 TP for TR 37.716-21-11: DC\_3A-(n)41AA\DC\_3A-(n)41CA\DC\_3A-(n)41DA**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Huawei, HiSilicon,Etisalat*

**Discussion:**

.

**Decision: Approved.**

**R4-2008018 TP for TR 37.716-21-11: DC\_3A-41A\_n41A\DC\_3A-41C\_n41A\DC\_3A-41D\_n41A**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008346 (from R4-2008018).**

**R4-2008346 TP for TR 37.716-21-11: DC\_3A-41A\_n41A\DC\_3A-41C\_n41A\DC\_3A-41D\_n41A**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008378           TP for TR 37.716-21-11 to add MSD for DC\_2A-5A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Ericsson*

**Abstract:**

**Decision:                    Return to.**

#### 8.4.3 EN-DC with FR2 band [DC\_R16\_2BLTE\_1BNR\_3DL2UL-Core]

**R4-2006394 Draft CR for 38.101-3 to introduce new UL EN-DC configuration for DC\_1-11\_n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2006396 TP for TR 37.716-21-11 DC\_11-18\_n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2008335 TP for TR 37.716-21-11 DC\_11-18\_n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2006397 TP for TR 37.716-21-11 DC\_18-41\_n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2007619 TP for TR 37.716-21-11 to include 2-46\_n260**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Ericsson, AT&T*

**Abstract:**

TP for TR 37.716-21-11 to include 2-46\_n260

**Discussion:**

.

**Decision: Approved.**

**R4-2007620 TP for TR 37.716-21-11 to include 46-66\_n260**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Ericsson, AT&T*

**Abstract:**

TP for TR 37.716-21-11 to include 46-66\_n260

**Discussion:**

.

**Decision: Approved.**

### 8.5 EN-DC of 3 LTE band and 1 NR band [DC\_R16\_3BLTE\_1BNR\_4DL2UL]

#### 8.5.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_3BLTE\_1BNR\_4DL2UL-Core/Perf]

**R4-2006046 TR 37.716-31-11 v0.12.0 Rel-16 DC combinations LTE 3DL and one NR band**

*Type: draft TR For: Agreement  
 37.716-31-11 v0.12.0  
 Source: Ericsson*

**Abstract:**

TR 37.716-31-11 v0.10.0 Rel-16 DC combinations LTE 3DL and one NR band

**Discussion:**

.

**Decision: To be email approved**

**R4-2007598 Revised WID LTE 3DL and one NR band Rel-16**

*Type: WID revised For: Decision  
 Source: Ericsson*

**Abstract:**

Revised WID LTE 3DL and one NR band Rel-16

**Discussion:**

.

**Decision: To be email approved**

**R4-2007607 CR introduction completed band combinations 37.716-31-11 -> 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0277 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 37.716-31-11 -> 38.101-3

**Discussion:**

.

**Decision: To be email approved**

#### 8.5.2 EN-DC without FR2 band [DC\_R16\_3BLTE\_1BNR\_4DL2UL-Core]

**R4-2006418 TP for TR 37.716-31-11 DC\_1-11-18\_n77**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Revised to R4-2008336 (from R4-2006418).**

**R4-2008336 TP for TR 37.716-31-11 DC\_1-11-18\_n77**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006419 TP for TR 37.716-31-11 DC\_1-11-18\_n78**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2008337 TP for TR 37.716-31-11 DC\_1-11-18\_n78**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2006421 TP for TR 37.716-31-11 DC\_1-18-41\_n3**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Revised to R4-2008338 (from R4-2006421).**

**R4-2008338 TP for TR 37.716-31-11 DC\_1-18-41\_n3**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006422 TP for TR 37.716-31-11 DC\_1-18-41\_n77**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Revised to R4-2008339 (from R4-2006422).**

**R4-2008339 TP for TR 37.716-31-11 DC\_1-18-41\_n77**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006423 TP for TR 37.716-31-11 DC\_1-18-41\_n78**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006500 TP for TR 37.716-31-11:DC\_2A-29A-66A\_n66A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006501 TP for TR 37.716-31-11:DC\_29A-30A-66A\_n66A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006502 TP for TR 37.716-31-11:DC\_29A-30A-66A\_n2A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006503 TP for TR 37.716-31-11:DC\_2A-29A-30A\_n2A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006504 TP for TR 37.716-31-11:DC\_2A-29A-66A\_n2A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006505 TP for TR 37.716-31-11:DC\_2A-30A-66A\_n2A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006506 TP for TR 37.716-31-11:DC\_29A-30A-66A-66A\_n2A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006507 TP for TR 37.716-31-11:DC\_2A-29A-66A-66A\_n2A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006508 TP for TR 37.716-31-11:DC\_2A-30A-66A-66A\_n2A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006620 Draft CR for 38.101-3: Support of n78C in DC\_1-3-5\_n78, DC\_1-3-7\_n78, DC\_1-5-7\_n78, and DC\_3-5-7\_n78**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SK Telecom*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2006670 Draft CR for TS 38.101-3: Support of n77(2A) in DC\_1-3-8\_n77 and DC\_1-8-42\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2006676 TP for TR 37.716-31-11: EN-DC\_1-3-8\_n28**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006831 TP for TR 37.716-31-11: UE requirements for DC\_3A-7A-8A\_n77A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: CHTTL*

**Discussion:**

.

**Decision: Approved.**

**R4-2006935 TP to TR 37.716-31-11 DC\_1A-3C-20A\_n41A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2007171 TP for 37.716-31-11 to introduce DC\_2-5-66\_n2**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2007172 TP for 37.716-31-11 to introduce DC\_2-5-66\_n5**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2007173 TP for 37.716-31-11 to introduce DC\_2-13-66\_n2**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2007621 TP for TR 37.716-31-11 to include 2-14-66\_n66**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Ericsson, AT&T*

**Abstract:**

TP for TR 37.716-31-11 to include 2-14-66\_n66

**Discussion:**

.

**Decision: Approved.**

**R4-2007622 TP for TR 37.716-31-11 to include 2-14-66\_n2**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Ericsson, AT&T*

**Abstract:**

2A-14A-66A\_n2A, 2A-14A-66A-66A\_n2A

**Discussion:**

.

**Decision: Approved.**

**R4-2007634 draft Rel-16 CR to 38.101-3 to add DC\_3C-7C-20A\_n1A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Ericsson, BT plc*

**Abstract:**

draft Rel-16 CR to 38.101-3 to add DC\_3C-7C-20A\_n1A

**Discussion:**

.

**Decision: Endorsed.**

**R4-2008019 TP for TR 37.716-31-11: DC\_1A-3A-7A\_n8A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008347 (from R4-2008019).**

**R4-2008347 TP for TR 37.716-31-11: DC\_1A-3A-7A\_n8A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008020 TP for TR 37.716-31-11: DC\_1A-3A-20A\_n8A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008021 TP for TR 37.716-31-11: DC\_1A-7A-20A\_n8A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008022 TP for TR 37.716-31-11: DC\_3A-7A-20A\_n8A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008023 TP for TR 37.716-31-11: DC\_1A-7A-8A\_n3A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008348 (from R4-2008023).**

**R4-2008348 TP for TR 37.716-31-11: DC\_1A-7A-8A\_n3A**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008024 TP for TR 37.716-31-11: DC\_1A-20A\_(n)38AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008025 TP for TR 37.716-31-11: DC\_1A-3A-32A\_n78A\DC\_1A-3A-32A\_n78(2A)**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Huawei, HiSilicon, CKH IOD UK*

**Discussion:**

.

**Decision: Approved.**

#### 8.5.3 EN-DC with FR2 band [DC\_R16\_3BLTE\_1BNR\_4DL2UL-Core]

**R4-2006420 TP for TR 37.716-31-11 DC\_1-11-18\_n257**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006424 TP for TR 37.716-31-11 DC\_1-18-41\_n257**

*Type: pCR For: Approval  
 37.716-31-11 v0.11.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

### 8.6 EN-DC of 4 LTE band and 1 NR band [DC\_R16\_4BLTE\_1BNR\_5DL2UL]

#### 8.6.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_4BLTE\_1BNR\_5DL2UL-Core/Perf]

**R4-2007166 Revised Rel-16 WID on Dual Connectivity (EN-DC) of 4 bands LTE inter-band CA (4DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID revised For: Decision  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007167 CR to introduce new combinations of LTE 4band + NR 1band for TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0274 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007168 draftTR 37.716-41-11 v0.10.0**

*Type: draft TR For: Agreement  
 37.716-41-11 v0.10.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Implementation of TPs from RAN4#95 for email approval after the meeting

**Discussion:**

.

**Decision: To be email approved**

#### 8.6.2 EN-DC without FR2 band [DC\_R16\_4BLTE\_1BNR\_5DL2UL-Core]

**R4-2006509 TP for TR 37.716-41-11:DC\_2A-29A-30A-66A\_n2A**

*Type: pCR For: Approval  
 37.716-41-11 v0.9.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2006621 Draft CR for 38.101-3: Support of n78C in DC\_1-3-5-7\_n78**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SK Telecom*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2008026 TP for TR 37.716-41-11: DC\_1A-3A-7A-20A\_n8A**

*Type: pCR For: Approval  
 37.716-41-11 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

#### 8.6.3 EN-DC with FR2 band [DC\_R16\_4BLTE\_1BNR\_5DL2UL-Core]

### 8.7 EN-DC of x bands (x=1,2, 3, 4) LTE inter-band CA and 2 bands NR inter-band CA [DC\_R16\_xBLTE\_2BNR\_yDL2UL]

#### 8.7.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_xBLTE\_2BNR\_yDL2UL-Core/Per]

**R4-2006726 TR 37.716-21-21 v1.0.0 update: LTE(xDL/1UL)+ NR(2DL/1UL) DC in Rel-16**

*Type: draft TR For: Agreement  
 37.716-21-21 v1.0.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006727 Revised WID on LTE (xDL/UL x=1.2,3,4) with NR 2 bands (2DL/1UL) EN DC in Rel-16**

*Type: WID revised For: Decision  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006728 Introducing CR on new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in Rel-16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0252 Cat: B (Rel-16)  
  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: To be email approved**

#### 8.7.2 EN-DC including NR inter CA without FR2 band [DC\_R16\_xBLTE\_2BNR\_yDL2UL-Core]

**R4-2006410 TP for TR 37.716-21-21 DC\_18\_n3-n77 update**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI, LGE*

**Discussion:**

.

**Decision: Approved.**

**R4-2006412 TP for TR 37.716-21-21 DC\_41\_n3-n77 update**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI, LGE*

**Discussion:**

.

**Decision: Approved.**

**R4-2006413 TP for TR 37.716-21-21 DC\_41\_n3-n78 update**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI, LGE*

**Discussion:**

.

**Decision: Approved.**

**R4-2006589 TP to TR 37.716-21-11: DC\_20\_n1-n7**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Nokia, Nokia, Shanghai Bell, BT plc*

**Abstract:**

DC\_20\_n1-n7

**Discussion:**

.

**Decision: Approved.**

**R4-2006590 TP to TR 37.716-21-11: DC\_3-20\_n1-n7**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Nokia, Nokia, Shanghai Bell, BT plc*

**Abstract:**

DC\_3-20\_n1-n7

**Discussion:**

.

**Decision: Approved.**

**R4-2006675 TP for TR 37.716-21-21: EN-DC\_1-3\_n28-n77**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006677 TP for TR 37.716-21-21: EN-DC\_1-8\_n3-n28**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006678 TP for TR 37.716-21-21: EN-DC\_1-8\_n28-n77**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006680 TP for TR 37.716-21-21: EN-DC\_3-8\_n28-n77**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006684 TP for TR 37.716-21-21: EN-DC\_42\_n28-n77**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Revised to R4-2008364 (from R4-2006684).**

**R4-2008364 TP for TR 37.716-21-21: EN-DC\_42\_n28-n77**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2006729 TP on summary of self-interference analysis for new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in Rel-16**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

**R4-2006936 TP to TR 37.716-21-21 DC\_20A\_n78(2A)-n92A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2007013 TP for TR37.716-21-21: DC\_1A-3A-20A\_n38A-n78A**

*Type: draftCR For: Endorsement  
 37.716-21-21 v1.0.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2007014 TP for TR37.716-21-21\_ DC\_3A-20A\_n38A-n78A**

*Type: draftCR For: Endorsement  
 37.716-21-21 v1.0.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2007327 TP for TR 37.716-21-21: DC\_2A\_n38A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Revised to R4-2008365 (from R4-2007327).**

**R4-2008365 TP for TR 37.716-21-21: DC\_2A\_n38A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Approved.**

**R4-2007328 TP for TR 37.716-21-21: DC\_66A\_n38A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Revised to R4-2008366 (from R4-2007328).**

**R4-2008366 TP for TR 37.716-21-21: DC\_66A\_n38A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Approved.**

**R4-2007329 TP for TR 37.716-21-21: DC\_2A-66A\_n38A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Approved.**

**R4-2007330 TP for TR 37.716-21-21: DC\_5\_n7-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Approved.**

**R4-2007331 TP for TR 37.716-21-21: DC\_12\_n7-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Approved.**

**R4-2007332 TP for TR 37.716-21-21: DC\_66\_n7-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Approved.**

**R4-2007333 TP for TR 37.716-21-21: DC\_2\_n7-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Discussion:**

.

**Decision: Approved.**

**R4-2008027 TP for TR 37.716-21-21: DC\_1A\_n75A-n78A\DC\_1A\_n75A-n78(2A)**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, CKH IOD UK*

**Discussion:**

.

**Decision: Revised to R4-2008367 (from R4-2008027).**

**R4-2008367 TP for TR 37.716-21-21: DC\_1A\_n75A-n78A\DC\_1A\_n75A-n78(2A)**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, CKH IOD UK*

**Discussion:**

.

**Decision: Approved.**

**R4-2008028 TP for TR 37.716-21-21: DC\_3A\_n75A-n78A\DC\_3A\_n75A-n78(2A)**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, CKH IOD UK*

**Discussion:**

.

**Decision: Revised to R4-2008368 (from R4-2008028).**

**R4-2008368 TP for TR 37.716-21-21: DC\_3A\_n75A-n78A\DC\_3A\_n75A-n78(2A)**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, CKH IOD UK*

**Discussion:**

.

**Decision: Approved.**

**R4-2008029 TP for TR 37.716-21-21: DC\_1A-3A\_n41A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008030 TP for TR 37.716-21-21: DC\_1A-20A\_n41A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008031 TP for TR 37.716-21-21: DC\_3A-20A\_n41A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008032 TP for TR 37.716-21-21: DC\_1A-7A\_n3A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, Telefonica*

**Discussion:**

.

**Decision: Approved.**

**R4-2008033 TP for TR 37.716-21-21: DC\_3A-20A\_n7A-n28A/DC\_3C-20A\_n7A-n28A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon, BT plc*

**Discussion:**

.

**Decision: Approved.**

**R4-2008034 TP for TR 37.716-21-21: DC\_1A-3A-20A\_n41A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008035 TP for TR 37.716-21-21: DC\_(n)41AA-n78A\DC\_(n)41CA-n78A\DC\_(n)41DA-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon,Etisalat*

**Discussion:**

.

**Decision: Revised to R4-2008369 (from R4-2008035).**

**R4-2008369 TP for TR 37.716-21-21: DC\_(n)41AA-n78A\DC\_(n)41CA-n78A\DC\_(n)41DA-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.11.0  
 Source: Huawei, HiSilicon,Etisalat*

**Discussion:**

.

**Decision: Approved.**

#### 8.7.3 EN-DC including NR inter CA with FR2 band [DC\_R16\_xBLTE\_2BNR\_yDL2UL-Core]

**R4-2006398 TP for TR 37.716-21-21 DC\_1\_n28-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006399 TP for TR 37.716-21-21 DC\_1-3\_n28-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006400 TP for TR 37.716-21-21 DC\_1-3-41\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006401 TP for TR 37.716-21-21 DC\_1-3-41-42\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006402 TP for TR 37.716-21-21 DC\_1-3-42\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006403 TP for TR 37.716-21-21 DC\_1-41\_n28-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006404 TP for TR 37.716-21-21 DC\_1-41\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006405 TP for TR 37.716-21-21 DC\_1-41-42\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006406 TP for TR 37.716-21-21 DC\_3\_n28-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006407 TP for TR 37.716-21-21 DC\_3-41\_n28-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006408 TP for TR 37.716-21-21 DC\_3-41\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006409 TP for TR 37.716-21-21 DC\_3-41-42\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006411 TP for TR 37.716-21-21 DC\_18-41\_n3-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006414 TP for TR 37.716-21-21 DC\_41\_n3-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006415 TP for TR 37.716-21-21 DC\_41\_n28-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006416 TP for TR 37.716-21-21 DC\_41\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006417 TP for TR 37.716-21-21 DC\_41-42\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-11 v0.10.0  
 Source: Samsung, KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2006623 Draft CR for 38.101-3: Support of n78C in the DC configurations including 1, 3, 5, 7, n78 and n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SK Telecom*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2006669 Draft CR for TS 38.101-3: Support of n77(2A) in DC\_1-8-11\_n77-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

### 8.8 Band combinations for SA NR supplementary uplink (SUL), NSA NR SUL, NSA NR SUL with UL sharing from the UE perspective (ULSUP) [NR\_SUL\_combos\_R16]

#### 8.8.1 Rapporteur Input (WID/TR/CR) [NR\_SUL\_combos\_R16-Core/Per]

**R4-2008066 Revised WID on Band combinations for SA NR Supplementary uplink (SUL), NSA NR SUL, NSA NR SUL with UL sharing from the UE perspective (ULSUP)**

*Type: WID revised For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: To be email approved**

**R4-2008067 TR 37.716-00-00 v0.7.0**

*Type: draft TR For: Agreement  
 37.716-00-00 v0.7.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To capture the approved TPs in this meeting

**Discussion:**

.

**Decision: To be email approved**

**R4-2008068 CR on Introduction of completed SUL band combinations into TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0364 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: To be email approved**

**R4-2008070 CR for 38.101-3: to clean up for SUL band combinations**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0280 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

#### 8.8.2 UE RF [NR\_SUL\_combos\_R16-Core]

**R4-2006948 Endorsed CR to 38307 on applicable SUL requirements**

*Type: CR For: Agreement  
 38.307 v16.2.0 CR-0023 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2008069 TP for TR 37.716-00-00 for SUL\_n41A-n95A**

*Type: pCR For: Approval  
 37.716-00-00 v0.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008370 (from R4-2008069).**

**R4-2008370 TP for TR 37.716-00-00 for SUL\_n41A-n95A**

*Type: pCR For: Approval  
 37.716-00-00 v0.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2008071 Draft CR for 38.101-1 to correct UL configuration for SUL band combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008371 (from R4-2008071).**

**R4-2008371 Draft CR for 38.101-1 to correct UL configuration for SUL band combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Endorsed.**

### 8.9 NR Inter-band Carrier Aggregation for 3 bands DL with 1 band UL [NR\_CA\_R16\_3BDL\_1BUL]

#### 8.9.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R16\_3BDL\_1BUL-Core/Per]

**R4-2006281 Revised WID on Rel-16 NR inter-band CA for 3 bands DL with 1 band UL**

*Type: WID revised For: Decision  
 Source: CATT*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2006283 TR 38.716-03-01 0.8.0**

*Type: draft TR For: Agreement  
 38.716-03-01 v0.8.0  
 Source: CATT*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006284 Introducing NR inter-band CA for 3DL Bands and 1UL band for 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0305 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006285 Introducing NR inter-band CA for 3DL Bands and 1UL band for 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0229 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: To be email approved**

#### 8.9.2 UE RF [NR\_CA\_R16\_3BDL\_1BUL-Core]

**R4-2006068 Correction to n29-n66-n70 CA combination**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0296 Cat: F (Rel-16)  
  
 Source: Dish Network*

**Discussion:**

Chair: To be included in Rapporteur CR for 38.101-1, hence the decision of “Endorsed” instead of “Agreed”

**Decision: Endorsed.**

**R4-2006832 TP for TR 38.716-03-01: UE requirements for CA\_n1A-n78A-n257A**

*Type: pCR For: Approval  
 38.716-03-01 v0.7.0  
 Source: CHTTL*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2006839 TP for TR 38.716-03-01: UE requirements for CA\_n1A-n78A-n257A**

*Type: pCR For: Approval  
 38.716-03-01 v0.7.0  
 Source: CHTTL*

**Discussion:**

.

**Decision: Approved.**

**R4-2006913 CR to TS 38.101-3 on corrections to 3BDL and 1BUL inter-band CA configurations between FR1 and FR2 (Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0262 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-3 on corrections to 3BDL and 1BUL inter-band CA configurations between FR1 and FR2 (Rel-16)

**Discussion:**

Chair: To be included in Rapporteur CR for 38.101-3, hence the decision of “Endorsed” instead of “Agreed”

**Decision: Endorsed.**

**R4-2007627 TP for TR 38.716-03-01 to include CA\_n1-n3-n7**

*Type: pCR For: Approval  
 38.716-03-01 v0.7.0  
 Source: Ericsson, Telstra, BT plc*

**Abstract:**

TP for TR 38.716-03-01 to include CA\_n1A-n3A-n7A, CA\_n1A-n3A-n7B

**Discussion:**

.

**Decision: Approved.**

**R4-2007628 TP for TR 38.716-03-01 to include CA\_n3-n7-n28**

*Type: pCR For: Approval  
 38.716-03-01 v0.7.0  
 Source: Ericsson, Telstra*

**Abstract:**

CA\_n3A-n7A-n28A, CA\_n3A-n7B-n28A

**Discussion:**

.

**Decision: Approved.**

**R4-2007629 TP for TR 38.716-03-01 to include CA\_n3-n7-n78**

*Type: pCR For: Approval  
 38.716-03-01 v0.7.0  
 Source: Ericsson, Telstra, BT plc*

**Abstract:**

CA\_n3A-n7A-n78A, CA\_n3A-n7B-n78A

**Discussion:**

.

**Decision: Approved.**

**R4-2007630 TP for TR 38.716-03-01 to include CA\_n7-n28-n78**

*Type: pCR For: Approval  
 38.716-03-01 v0.7.0  
 Source: Ericsson, Telstra*

**Abstract:**

CA\_n7A-n28A-n78A, CA\_n7B-n28A-n78A

**Discussion:**

.

**Decision: Approved.**

### 8.10 NR Inter-band Carrier Aggregation for 4 bands DL with 1 band UL [NR\_CA\_R16\_4BDL\_1BUL]

#### 8.10.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R16\_4BDL\_1BUL-Core/Per]

**R4-2006047 TR 38.716-04-01 v0.5.0 Rel-16 NR Inter-band 4 bands CA**

*Type: draft TR For: Agreement  
 38.716-04-01 v0.5.0  
 Source: Ericsson*

**Abstract:**

TR 38.716-04-01 v0.3.0 Rel-16 NR Inter-band 4 bands CA

**Discussion:**

.

**Decision: To be email approved**

**R4-2007599 Revised WID 4 bands NR CA Rel-16**

*Type: WID revised For: Decision  
 Source: Ericsson*

**Abstract:**

Revised WID 4 bands NR CA Rel-16

**Discussion:**

.

**Decision: To be email approved**

**R4-2007608 CR introduction completed band combinations 38.716-04-01 -> 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0361 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.716-04-01 -> 38.101-1

**Discussion:**

.

**Decision: To be email approved**

**R4-2007609 CR introduction completed band combinations 38.716-04-01 -> 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0278 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.716-04-01 -> 38.101-3

**Discussion:**

.

**Decision: To be email approved**

#### 8.10.2 UE RF [NR\_CA\_R16\_4BDL\_1BUL-Core]

**R4-2006611 TP to TR 38.716-04-01 for CA\_n7-n25-n66-n78**

*Type: pCR For: Approval  
 38.716-04-01 v0.4.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Approved.**

**R4-2007631 TP for TR 38.716-04-01 to include CA\_n1-n3-n7-n28**

*Type: pCR For: Approval  
 38.716-04-01 v0.4.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 38.716-04-01 to include CA\_n1A-n3A-n7A-n28A, CA\_n1A-n3A-n7B-n28A

**Discussion:**

.

**Decision: Approved.**

**R4-2007632 TP for TR 38.716-04-01 to include CA\_n1-n3-n7-n78**

*Type: pCR For: Approval  
 38.716-04-01 v0.4.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 38.716-04-01 to include CA\_n1A-n3A-n7A-n78A, CA\_n1A-n3A-n7B-n78A

**Discussion:**

.

**Decision: Approved.**

**R4-2007633 TP for TR 38.716-04-01 to include CA\_n3-n7-n28-n78**

*Type: pCR For: Approval  
 38.716-04-01 v0.4.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 38.716-04-01 to include CA\_n3A-n7A-n28A-n78A, CA\_n3A-n7B-n28A-n78A

**Discussion:**

.

**Decision: Approved.**

### 8.11 NR Inter-band Carrier Aggregation/Dual connectivity for 3 bands DL with 2 bands UL [NR\_CADC\_R16\_3BDL\_2BUL]

#### 8.11.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R16\_3BDL\_2BUL-Core/Per]

**R4-2006873 TR 38.716-03-02 v070**

*Type: draft TR For: Agreement  
 38.716-03-02 v0.7.0  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007558 Revised WID on Rel-16 NR Inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with 2 bands UL**

*Type: WID revised For: Decision  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007556 CR to reflect the completed NR inter band CA DC combinations for 3 bands DL with 2 bands UL into Rel16 TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0357 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007557 CR to reflect the completed NR inter band CA DC combinations for 3 bands DL with 2 bands UL into Rel16 TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0276 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: To be email approved**

#### 8.11.2 UE RF [NR\_CADC\_R16\_3BDL\_2BUL-Core]

**R4-2006607 TP to TR 38.716-03-02 for CA\_n7-n25-n66**

*Type: pCR For: Approval  
 38.716-03-02 v0.6.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Revised to R4-2008372 (from R4-2006607).**

**R4-2008372 TP to TR 38.716-03-02 for CA\_n7-n25-n66**

*Type: pCR For: Approval  
 38.716-03-02 v0.6.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Approved.**

**R4-2006608 TP to TR 38.716-03-02 for CA\_n7-n66-n78**

*Type: pCR For: Approval  
 38.716-03-02 v0.6.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Revised to R4-2008373 (from R4-2006608).**

**R4-2008373 TP to TR 38.716-03-02 for CA\_n7-n66-n78**

*Type: pCR For: Approval  
 38.716-03-02 v0.6.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Approved.**

**R4-2006609 TP to TR 38.716-03-02 for CA\_n25-n66-n78**

*Type: pCR For: Approval  
 38.716-03-02 v0.6.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Revised to R4-2008374 (from R4-2006609).**

**R4-2008374 TP to TR 38.716-03-02 for CA\_n25-n66-n78**

*Type: pCR For: Approval  
 38.716-03-02 v0.6.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Approved.**

**R4-2006610 TP to TR 38.716-03-02 for CA\_n5-n66-n78**

*Type: pCR For: Approval  
 38.716-03-02 v0.6.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

.

**Decision: Approved.**

**R4-2006929 TP for TR 38.716-03-02 CA\_n1A-n3A-n78A with 2UL**

*Type: pCR For: Approval  
 38.716-03-02 v0.6.0  
 Source: China Telecom*

**Abstract:**

This TP is to finish the ?TIB,c, ?RIB,c values and MSD requirements for CA\_n1A-n3A-n78A with 2UL.

**Discussion:**

.

**Decision: Approved.**

**R4-2008037 TP for TR 38.716-03-02: CA\_n28A-n41A-n78A with two UL bands**

*Type: pCR For: Approval  
 38.716-03-02 v0.6.0  
 Source: Huawei, HiSilicon,Etisalat*

**Discussion:**

.

**Decision: Revised to R4-2008375 (from R4-2008037).**

**R4-2008375 TP for TR 38.716-03-02: CA\_n28A-n41A-n78A with two UL bands**

*Type: pCR For: Approval  
 38.716-03-02 v0.6.0  
 Source: Huawei, HiSilicon,Etisalat*

**Discussion:**

.

**Decision: Approved.**

### 8.12 Dual Connectivity (EN-DC) with 3 bands DL and 3 bands UL [DC\_R16\_LTE\_NR\_3DL3UL]

#### 8.12.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_LTE\_NR\_3DL3UL-Core/Per]

**R4-2007022 Revised WID on Rel-16 Dual Connectivity (EN-DC) with 3 bands DL and 3 bands UL**

*Type: WID revised For: Decision  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007023 CR to reflect the completed ENDC combinations for 3 bands DL with 3 bands UL into Rel16 TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0269 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: To be email approved**

**R4-2007024 TR 37.716-33 v0.3.0: Dual Connectivity (EN-DC) with 3 bands DL and 3 bands UL**

*Type: draft TR For: Agreement  
 37.716-33 v0.2.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: To be email approved**

#### 8.12.2 UE RF [DC\_R16\_LTE\_NR\_3DL3UL-Core]

**R4-2007015 TP for TR37.716-33\_ DC\_3A\_n40A-n258A**

*Type: draftCR For: Endorsement  
 37.716-33 v0.2.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

### 8.13 Dual Connectivity (EN-DC) of LTE inter-band CA xDL/1UL bands (x=2,3,4) and NR FR1 1DL/1UL band and NR FR2 1DL/1UL band [DC\_R16\_xBLTE\_2BNR\_yDL3UL]

#### 8.13.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_xBLTE\_2BNR\_yDL3UL-Core/Per]

**R4-2006992 Revised WID Dual Connectivity (EN-DC) of LTE inter-band CA xDL1UL bands (x=2,3,4) and NR FR1 1DL1UL band and NR FR2 1DL1UL band**

*Type: WID revised For: Decision  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006994 Updated TR 37.716-41-22**

*Type: draft TR For: Agreement  
 37.716-41-22 v0.1.0  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: To be email approved**

**R4-2006995 CR for introduce new EN-DC of LTE 2,3,4 band + NR FR1 1UL/1DL band + NR FR2 1UL/1DL band for TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0265 Cat: F (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: To be email approved**

#### 8.13.2 UE RF [DC\_R16\_xBLTE\_2BNR\_yDL3UL-Core]

### 8.14 29dBm UE Power Class for B41 and n41 [LTE\_NR\_B41\_Bn41\_PC29dBm]

**R4-2008320           Email discussion summary for [95e][130] LTE\_NR\_B41\_Bn41\_PC29dBm**

*Type: other For: Information  
 Source: Moderator (T-Mobile USA)*

**Discussion:**

.

**Decision: Revised to R4-2008958 (from R4-2008320).**

**R4-2008958           Email discussion summary for [95e][130] LTE\_NR\_B41\_Bn41\_PC29dBm**

*Type: other For: Information  
 Source: Moderator (T-Mobile USA)*

**Discussion:**

.

**Decision: Return to.**

**R4-2008902           WF on additional measurements for 29 dBm MPR/A-MPR for UL MIMO and TxD**

*Type: others For: Approval*

*Source: T-Mobile USA*

**Discussion:**

.

**Decision:                    Return to.**

#### 8.14.1 Rapporteur Input (WID/TR/CR) [LTE\_NR\_B41\_Bn41\_PC29dBm]

**R4-2006643 Revised WID for 29 dBm UE Power Class for LTE Band 41and NR Band n41**

*Type: WID revised For: Decision  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Noted.**

#### 8.14.2 UE RF (36.101, 38.101-1, 38.101-3) [LTE\_NR\_B41\_Bn41\_PC29dBm]

**R4-2006346 PC1.5 UL MIMO**

*Type: discussion For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006639 [29dBm] RIMD impact on EVM and MPR for UL MIMO and Tx Diversity**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

RIMD impact to EVM in UL MIMO and TX diversity is discussed and measurements resukts in this contribution provide proposals to the MPR related to EVM.

**Discussion:**

.

**Decision: Noted.**

**R4-2006644 CR for 38.101-1: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0316 Cat: B (Rel-16)  
  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006645 CR for 38.101-3: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0249 Cat: B (Rel-16)  
  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Revised to R4-2008904 (from R4-2006645).**

**R4-2008904 CR for 38.101-3: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0249 Cat: B (Rel-16)  
  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Return to.**

**R4-2006647 LS to RAN4 on New UE capabilities for Power Class 1.5**

*Type: LS out For: Approval  
 to RAN2  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Revised to R4-2008906 (from R4-2006647).**

**R4-2008906 LS to RAN2 on New UE capabilities for Power Class 1.5**

*Type: LS out For: Approval  
 to RAN2  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Return to.**

**R4-2006648 29 dBm Power Class number revisited**

*Type: discussion For: Approval  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Noted.**

**R4-2006752 CR for Alloc\_aware\_ENDC\_MPR for 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0253 Cat: C (Rel-16)  
  
 Source: CMCC*

**Discussion:**

.

**Decision: Revised to R4-2008903 (from R4-2006752).**

**R4-2008903 CR for Alloc\_aware\_ENDC\_MPR for 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0253 Cat: C (Rel-16)  
  
 Source: CMCC*

**Discussion:**

.

**Decision: Return to.**

**R4-2006794 Remaining issues for Rel-16 B41/n41 intra-band EN-DC requirements**

*Type: other For: Approval  
 Source: LG Electronics Polska*

**Discussion:**

.

**Decision: Noted.**

**R4-2006795 Analysis of MPR and EVM based on reverse IMD for PC1.5 UL-MIMO**

*Type: other For: Discussion  
 Source: LG Electronics Polska*

**Discussion:**

.

**Decision: Revised to R4-2008330 (from R4-2006795).**

**R4-2008330 Analysis of MPR and EVM based on reverse IMD for PC1.5 UL-MIMO**

*Type: other For: Discussion  
 Source: LG Electronics Polska*

**Discussion:**

.

**Decision: Noted.**

**R4-2006796 CR for NS\_04 A-MPR for B41n41 intra-band EN-DC in Rel-16**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0254 Cat: C (Rel-16)  
  
 Source: LG Electronics Polska*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006897 Clarification of 29dBm transmission for EN-DC UE**

*Type: discussion For: Approval  
 Source: KDDI Corporation*

**Abstract:**

Clarification of 29dBm transmission for EN-DC UE

**Discussion:**

.

**Decision: Noted.**

**R4-2008117 A-MPR for PC2/1.5 EN-DC**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2008204 MPR and NS\_04 A-MPR for 29 dBm UL-MIMO**

*Type: discussion For: Approval  
 Source: T-Mobile USA Inc.*

**Abstract:**

Initial Proposal for MPR and NS\_04 A-MPR for 29 dBm UL-MIMO

**Discussion:**

.

**Decision: Noted.**

#### 8.14.3 Others [LTE\_NR\_B41\_Bn41\_PC29dBm]

**R4-2006646 CR for 38.307: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 38.307 v16.2.0 CR-0019 Cat: B (Rel-16)  
  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Revised to R4-2008905 (from R4-2006646).**

**R4-2008905 CR for 38.307: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 38.307 v16.2.0 CR-0019 Cat: B (Rel-16)  
  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Return to.**

### 8.15 Power Class 2 UE for EN-DC (1 LTE FDD band +1 NR TDD band) [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**GTW session on June 1:**

[95e][131] ENDC\_UE\_PC2\_FDD\_TDD:

The discussion was based on a draft WF prepared by Moderator “Draft R4-2008907 WF on PC2 EN-DC FDD+TDD HPUE” shared in the online draft folder. There was no agreement and further discussion will continue in this thread.

**R4-2008321           Email discussion summary for [95e][131] ENDC\_UE\_PC2\_FDD\_TDD**

*Type: other For: Information  
 Source: Moderator (China Unicom)*

**Discussion:**

.

**Decision: Revised to R4-2008959 (from R4-2008321).**

**R4-2008959           Email discussion summary for [95e][131] ENDC\_UE\_PC2\_FDD\_TDD**

*Type: other For: Information  
 Source: Moderator (China Unicom)*

**Discussion:**

.

**Decision: Return to.**

**R4-2008907           WF on PC2 EN-DC FDD+TDD HPUE**

*Type: others For: Approval*

*Source: China Unicom*

**Discussion:**

.

**Decision:                    Return to.**

#### 8.15.1 General [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**R4-2006379 Further consideration on remaining issues from PC2 FDD-TDD ENDC**

*Type: discussion For: Approval  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2006381 Discussion on the remain issues for NSA high power UE**

*Type: other For: Approval  
 Source: Xiaomi*

**Discussion:**

.

**Decision: Noted.**

**R4-2006614 On proceeding of EN-DC PC2 FDD + TDD HPUE**

*Type: discussion For: Approval  
 Source: China Unicom*

**Discussion:**

.

**Decision: Noted.**

**R4-2006843 Further discussion on blind scheme of FDD-TDD EN-DC High Power UE**

*Type: discussion For: Approval  
 Source: CHTTL*

**Discussion:**

.

**Decision: Noted.**

**R4-2008228 On FDD\_TDD EN-DC HPUE**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008264 CR for adding SAR solutions for FDD+TDD EN-DC PC2 UE**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0292 Cat: B (Rel-16)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Return to.**

#### 8.15.2 UE RF requirement [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**R4-2006380 Draft CR for TS 38.101-3 to introduce power class for PC2 FDD-TDD ENDC**

*Type: draftCR For: Endorsement  
 38.101-3 v16.3.0  
 Source: Samsung*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2006382 MSD analysis on high power UE for DC\_3\_n41**

*Type: other For: Approval  
 Source: Xiaomi*

**Discussion:**

.

**Decision: Noted.**

**R4-2006654 UE based SAR control for Power Class 2 EN-DC FDD+TDD**

*Type: discussion For: Approval  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Noted.**

**R4-2007008 Discussion on MSD for HPUE 3+n41**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2007052 EN-DC Power Class 2 for FDD-TDD band combinations without required CG coordination**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose a specification framework for EN-DC power class 2 for FDD-TDD combination based on both duty-cycle indication and reducing the FDD power feasible for networks with and without strict scheduler coordination between CGs

**Discussion:**

.

**Decision: Noted.**

**R4-2007053 Introduction of EN-DC power class 2 for FDD-TDD band combinations**

*Type: CR For: Agreement  
 38.101-3 v16.3.0 CR-0273 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce requirements for EN-DC power class 2 for FDD-TDD band combinations

**Discussion:**

.

**Decision: Not pursued.**

#### 8.15.3 Signaling [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**R4-2008262 On EN-DC (FDD+TDD) HPUE fall back schemes**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2008263 Draft LS on UE capability for PC2 inter-band EN-DC (LTE FDD+NR TDD)**

*Type: LS out For: Approval  
 to RAN2  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

### 8.16 Introduction of NR band n259 [NR\_n259]

**R4-2008322           Email discussion summary for [95e][132] NR\_n259**

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

**Discussion:**

.

**Decision: Revised to R4-2008960 (from R4-2008322).**

**R4-2008960           Email discussion summary for [95e][132] NR\_n259**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2007800 Updated TR 38.887**

*Type: draft TR For: Agreement  
 38.887 v0.4.0  
 Source: Ericsson*

**Abstract:**

Updated TR

**Discussion:**

.

**Decision: Agreed.**

**R4-2008969           Updated TR 38.887**

*Type: draft TR For: Agreement  
 38.887 v0.5.0  
 Source: Ericsson*

**Discussion:**

.

**Decision:                    To be email approved**

#### 8.16.1 UE RF (38.101-2) [NR\_n259-Core]

**R4-2006990 CR for the introduction of n259**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0185 Cat: F (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2007087 EESS protection of n259 UE RF requirements**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

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

**R4-2007793 TP to TR 38.887 on UE RF requirements**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on multiband relaxation

**Discussion:**

.

**Decision: Approved.**

**R4-2007795 CR to 38.101-2 for Introduction of band n259**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0191 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Revised to R4-2008908 (from R4-2007795).**

**R4-2008908 CR to 38.101-2 for Introduction of band n259**

*Type: CR For: Agreement  
 38.101-2 v16.3.1 CR-0191 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Return to.**

#### 8.16.2 BS RF (38.104) [NR\_n259-Core]

**R4-2007792 TP to TR 38.887 on BS RF requirements**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on BS RF requirements

**Discussion:**

.

**Decision: Approved.**

**R4-2007796 CR to 38.141-2 for Introduction of band n259**

*Type: CR For: Agreement  
 38.141-2 v16.3.0 CR-0190 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Revised to R4-2008909 (from R4-2007796).**

**R4-2008909 CR to 38.141-2 for Introduction of band n259**

*Type: CR For: Agreement  
 38.141-2 v16.3.0 CR-0190 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Return to.**

**R4-2007797 CR to 38.104 for Introduction of band n259**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0205 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Agreed.**

#### 8.16.3 RRM (38.133) [NR\_n259-Core]

**R4-2007794 TP to TR 38.887 on RRM**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on RRM

**Discussion:**

.

**Decision: Revised to R4-2008910 (from R4-2007794).**

**R4-2008910 TP to TR 38.887 on RRM**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on RRM

**Discussion:**

.

**Decision: Return to.**

**R4-2007798 CR to 38.133 for Introduction of band n259**

*Type: CR For: Agreement  
 38.133 v16.3.0 CR-0818 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Revised to R4-2008911 (from R4-2007798).**

**R4-2008911 CR to 38.133 for Introduction of band n259**

*Type: CR For: Agreement  
 38.133 v16.3.0 CR-0818 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Return to.**

#### 8.16.4 Others [NR\_n259-Core/Perf]

### 8.17 Adding 25MHz and 50MHz channel bandwidth in NR band n1 [NR\_n1\_BW2]

**R4-2008323           Email discussion summary for [95e][133] NR\_BW**

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

**Discussion:**

.

**Decision: Revised to R4-2008961 (from R4-2008323).**

**R4-2008961           Email discussion summary for [95e][133] NR\_BW**

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

**Discussion:**

.

**Decision: Return to.**

#### 8.17.1 UE RF (38.101-1) [NR\_n1\_BW2-Core]

**R4-2007324 CR for TS 38.101: adding 50 MHz CBW for n1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0356 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon, China unicom*

**Discussion:**

.

**Decision: Revised to R4-2008912 (from R4-2007324).**

**R4-2008912 CR for TS 38.101: adding 50 MHz CBW for n1**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0356 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon, China unicom*

**Discussion:**

.

**Decision: Return to.**

#### 8.17.2 BS RF (38.104) [NR\_n1\_BW2-Core]

**R4-2007325 CR for TS 38.104: adding 50 MHz CBW for n1**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0190 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon, China unicom*

**Discussion:**

.

**Decision: Return to.**

#### 8.17.3 RRM (38.133) [NR\_n1\_BW2-Core]

#### 8.17.4 Others [NR\_n1\_BW2-Core/Perf]

### 8.18 LTE/NR spectrum sharing in band 48/n48 frequency range [NR\_n48\_LTE\_48\_coex-Core]

**GTW session on May 29:**

[95e][134] NR\_n48\_LTE\_48\_coex:

The discussion was based on moderator summary R4-2008324.

The following agreements were made.

Channel raster:

Option1 and option 3 will be further considered.

Further work on Option 3:

* How the shift works?
  + BS configures the channel raster with the shift
* What is the impact on MPR with the shift?
  + Alt. 1: Network indicates NS 35 in the cell and the network may or may not blank the edge UL RBs. UE follows scheduling in UL transmission.
    - FFS UE requirements would be met
    - FFS DL needs RB blanking or not
  + Alt. 2: there could be no specification impact due to the UE MPR implementation margin, but the UE needs to be informed when to apply this additional backoff

Sync pattern:

To further explore option 1 and option 3:

* Option 1: Keep existing pattern C (no changes to the specifications);
* Option 2: Adopt pattern B in addition to pattern C;
* Option 3: Adopt pattern B with a new band (we can follow the practice of what RAN4 did in DSS for band 41);

**R4-2008324           Email discussion summary for [95e][134] NR\_n48\_LTE\_48\_coex**

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

**Discussion:**

.

**Decision: Revised to R4-2008962 (from R4-2008324).**

**R4-2008962           Email discussion summary for [95e][134] NR\_n48\_LTE\_48\_coex**

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

**Discussion:**

.

**Decision: Return to.**

#### 8.18.1 General (such as work plan, AH minutes) [NR\_n48\_LTE\_48\_coex-Core]

#### 8.18.2 Channel raster, sync raster, and UL shift [NR\_n48\_LTE\_48\_coex-Core]

**R4-2006336 LTE/NR spectrum sharing in band 48/n48 frequency range (channel raster)**

*Type: discussion For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision:** The document was **revised to R4-2008288**.

**R4-2006337 LTE/NR spectrum sharing in band 48/n48 frequency range (UL shift)**

*Type: discussion For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006338 LTE/NR spectrum sharing in band 48/n48 frequency range (sync pattern)**

*Type: discussion For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision:** The document was **revised to R4-2008289**.

**R4-2006588 Views on band 48/n48 spectrum sharing**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

no change is raster is proposed. Sync pattern B has benefit in 4-port LTE deployment.

**Discussion:**

.

**Decision: Noted.**

**R4-2006871 Views on dynamic spectrum sharing between LTE band 48 and NR band n48**

*Type: discussion For: Approval  
 38.104 v..  
 Source: Google Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2007086 DSS in band n48**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2007441 On LTE/NR spectrum sharing in band 48/n48**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2007791 UL shift for LTE/NR spectrum sharing in band 48/n48**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Paper for approval. UL shift

**Discussion:**

.

**Decision: Noted.**

**R4-2008288 LTE/NR spectrum sharing in band 48/n48 frequency range (channel raster)**

*Type: discussion For: Decision  
 Source: Apple Inc.*

(Replaces   
R4-2006336)

**Discussion:**

.

**Decision: Noted.**

**R4-2008289 LTE/NR spectrum sharing in band 48/n48 frequency range (sync pattern)**

*Type: discussion For: Decision  
 Source: Apple Inc.*

(Replaces   
R4-2006338)

**Discussion:**

.

**Decision: Noted.**

### 8.19 Adding 40 MHz channel bandwidth (15, 30 and 60kHz SCS) in NR band n3 [NR\_n3\_BW]

#### 8.19.1 UE RF (38.101-1) [NR\_n3\_BW]

**R4-2007506 CR to TS 38.101-1 - Add 40 MHz CBW in band n3**

*Type: CR For: Agreement  
 38.141-1 v16.3.0 CR-0137 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces support of 40 MHz CBW to band n3 in TS 38.101-1

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2007569 CR to TS 38.101-1 - Add 40 MHz CBW in band n3**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0358 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces support of 40 MHz CBW to band n3 in TS 38.101-1

**Discussion:**

.

**Decision: Revised to R4-2008913 (from R4-2007569).**

**R4-2008913 CR to TS 38.101-1 - Add 40 MHz CBW in band n3**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0358 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces support of 40 MHz CBW to band n3 in TS 38.101-1

**Discussion:**

.

**Decision: Return to.**

**R4-2007879 Band n65 – wider CBW – UE RF requirements – A-MPR simulation results**

*Type: other For: Agreement  
 Source: Ericsson*

**Abstract:**

This contribution provides our A-MPR simulation results and proposes A-MPR regions and corresponding values

**Discussion:**

.

**Decision: Noted.**

**R4-2008134 [NR\_n3] 40MHz REFSENS Measurements**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

.

**Decision: Noted.**

#### 8.19.2 BS RF (38.104) [NR\_n3\_BW]

**R4-2007505 CR to TS 38.104 - Add 40 MHz CBW in band n3**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0198 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces support of 40 MHz CBW to band n3 in TS 38.104

**Discussion:**

.

**Decision: Return to.**

#### 8.19.3 RRM (38.133) [NR\_n3\_BW]

#### 8.19.4 Others [NR\_n3\_BW]

### 8.20 Adding 50 MHz channel bandwidth (15, 30 and 60kHz SCS) in NR band n65 [NR\_n65\_BW]

#### 8.20.1 UE RF (38.101-1) [NR\_n65\_BW]

**R4-2007508 CR to TS 38.101-1 - Add 50 MHz CBW in band n65**

*Type: CR For: Agreement  
 38.141-1 v16.3.0 CR-0138 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces support of 50 MHz CBW to band n65 in TS 38.101-1

**Discussion:**

.

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

**R4-2007570 CR to TS 38.101-1 - Add 50 MHz CBW in band n65**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0359 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces support of 50 MHz CBW to band n65 in TS 38.101-1

**Discussion:**

.

**Decision: Revised to R4-2008914 (from R4-2007570).**

**R4-2008914 CR to TS 38.101-1 - Add 50 MHz CBW in band n65**

*Type: CR For: Agreement  
 38.101-1 v16.3.0 CR-0359 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces support of 50 MHz CBW to band n65 in TS 38.101-1

**Discussion:**

.

**Decision: Return to.**

**R4-2008133 [NR\_n65\_BW] Back-off Measurements**

*Type: discussion For: Discussion  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

.

**Decision: Noted.**

#### 8.20.2 BS RF (38.104) [NR\_n65\_BW]

**R4-2007507 CR to TS 38.104 - Add 50 MHz CBW in band n65**

*Type: CR For: Agreement  
 38.104 v16.3.0 CR-0199 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces support of 50 MHz CBW to band n65 in TS 38.104

**Discussion:**

.

**Decision: Return to.**

#### 8.20.3 RRM (38.133) [NR\_n65\_BW]

#### 8.20.4 Others [NR\_n65\_BW]

## 9 Study Items for NR

### 9.2 Study on 7-24GHz frequency range [FS\_7to24GHz\_NR]

**R4-2008325           Email discussion summary for [95e][135] FS\_7to24GHz\_NR**

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

**Discussion:**

.

**Decision: Revised to R4-2008963 (from R4-2008325).**

**R4-2008963           Email discussion summary for [95e][135] FS\_7to24GHz\_NR**

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

**Discussion:**

.

**Decision: Return to.**

#### 9.2.1 General [FS\_7to24GHz\_NR]

**R4-2008138 TP to TR 38.820: editorial cleanup**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Huawei*

**Abstract:**

TP to TR 38.820 for the general cleanup, before the submission to June RAN for Approval of the Rel-16 version of the TR.

**Discussion:**

.

**Decision: Revised to R4-2008915 (from R4-2008138).**

**R4-2008915 TP to TR 38.820: editorial cleanup**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Huawei*

**Abstract:**

TP to TR 38.820 for the general cleanup, before the submission to June RAN for Approval of the Rel-16 version of the TR.

**Discussion:**

.

**Decision: Return to.**

#### 9.2.2 Regulatory survey [FS\_7to24GHz\_NR]

**R4-2008140 TP to TR 38.820: clarification on WRC-19 resolution for IMT for fixed wireless broadband in fixed services bands**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Huawei*

**Abstract:**

TP to TR 38.820 provides clarification to the WRC-19 resolution COM6/18 on the IMT for fixed wireless broadband in fixed services bands.

**Discussion:**

.

**Decision: Approved.**

#### 9.2.3 Deployment scenarios [FS\_7to24GHz\_NR]

**R4-2008139 TP to TR 38.820: deployment scenarios cleanup**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Huawei*

**Abstract:**

TP to TR 38.820 provides cleanup of the deployments scenarios section, introducing additional text on the inter-relations among the FWA, fixed wireless broadband, and IAB scenarios.

**Discussion:**

.

**Decision: Revised to R4-2008916 (from R4-2008139).**

**R4-2008916 TP to TR 38.820: deployment scenarios cleanup**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Huawei*

**Abstract:**

TP to TR 38.820 provides cleanup of the deployments scenarios section, introducing additional text on the inter-relations among the FWA, fixed wireless broadband, and IAB scenarios.

**Discussion:**

.

**Decision: Return to.**

#### 9.2.4 RF technology aspects [FS\_7to24GHz\_NR

#### 9.2.5 NR UE [FS\_7to24GHz\_NR]

##### 9.2.5.1 NR UE architecture [FS\_7to24GHz\_NR]

##### 9.2.5.2 TX requirements [FS\_7to24GHz\_NR]

##### 9.2.5.3 RX requirements [FS\_7to24GHz\_NR]

#### 9.2.6 NR BS [FS\_7to24GHz\_NR]

##### 9.2.6.1 BS types, BS requirement sets [FS\_7to24GHz\_NR]

##### 9.2.6.2 NR BS architecture [FS\_7to24GHz\_NR]

**R4-2006925 TP to TR 38.820: Addition of antenna parameter selection guideline in subclause 7.2.3**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Ericsson*

**Abstract:**

In this contribution a text proposal for TR 38.820, subclause 7.2.3 with additional technical background for how to determine antenna parameters for different array geometries is prepared. The text proposal is attached at the end of the contribution and i

**Discussion:**

.

**Decision: Revised to R4-2008917 (from R4-2006925).**

**R4-2008917 TP to TR 38.820: Addition of antenna parameter selection guideline in subclause 7.2.3**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Ericsson*

**Abstract:**

In this contribution a text proposal for TR 38.820, subclause 7.2.3 with additional technical background for how to determine antenna parameters for different array geometries is prepared. The text proposal is attached at the end of the contribution and i

**Discussion:**

.

**Decision: Return to.**

##### 9.2.6.3 TX requirements [FS\_7to24GHz\_NR]

**R4-2006105 TP to TR 38.820: Summary Tables for Transmitter Requirements**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The BS classes section 7.3 in TR 38.820 for 7 - 24 GHz frequency range remains to be filled in. This contribution provides a TP to fill in this section in the TR.

**Discussion:**

.

**Decision: Revised to R4-2008918 (from R4-2006105).**

**R4-2008918 TP to TR 38.820: Summary Tables for Transmitter Requirements**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The BS classes section 7.3 in TR 38.820 for 7 - 24 GHz frequency range remains to be filled in. This contribution provides a TP to fill in this section in the TR.

**Discussion:**

.

**Decision: Return to.**

**R4-2006106 TP to TR 38.820: Summary Tables for Receiver Requirements**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The BS classes section 7.3 in TR 38.820 for 7 - 24 GHz frequency range remains to be filled in. This contribution provides a TP to fill in this section in the TR.

**Discussion:**

.

**Decision: Revised to R4-2008919 (from R4-2006106).**

**R4-2008919 TP to TR 38.820: Summary Tables for Receiver Requirements**

*Type: pCR For: Approval  
 38.820 v1.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The BS classes section 7.3 in TR 38.820 for 7 - 24 GHz frequency range remains to be filled in. This contribution provides a TP to fill in this section in the TR.

**Discussion:**

.

**Decision: Return to.**

##### 9.2.6.4 RX requirements [FS\_7to24GHz\_NR]

## 10 Rel-17 spectrum related Work Items for NR

### 10.1 Introduction of FR2 FWA UE with maximum TRP of 23dBm for band n257 and n258 [NR\_FR2\_FWA\_Bn257\_Bn258]

**R4-2008326           Email discussion summary for [95e][136] NR\_FR2\_FWA\_Bn257\_Bn258**

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

**Discussion:**

.

**Decision: Revised to R4-2008964 (from R4-2008326).**

**R4-2008964           Email discussion summary for [95e][136] NR\_FR2\_FWA\_Bn257\_Bn258**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008920           LS to RAN2 on FR2 FWA options**

*Type: LS out For: Approval  
 to RAN2  
 Source: SoftBank*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008921           WF on FR2 FWA evaluations**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008922           WF on FR2 FWA RF requirements**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

#### 10.1.1 UE RF (38.101-2) [NR\_FR2\_FWA\_Bn257\_Bn258]

**R4-2006432 Discussion on new FR2 FWA UE**

*Type: discussion For: Discussion  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2006703 Spherical EIRP EIS of FR2 FWA UE with maximum TRP of 23dBm**

*Type: discussion For: Approval  
 Source: MediaTek Beijing Inc.*

**Abstract:**

Proposals for spherical EIRP EIS of FR2 FWA UE with maximum TRP of 23dBm

**Discussion:**

.

**Decision: Noted.**

**R4-2006705 MBR of FR2 FWA UE with maximum TRP of 23dBm**

*Type: discussion For: Approval  
 Source: MediaTek Beijing Inc.*

**Abstract:**

Proposals for MBR of FR2 FWA UE with maximum TRP of 23dBm

**Discussion:**

.

**Decision: Noted.**

**R4-2006776 FR2 23dBm FWA pk. EIRP and REFSENS budgets**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

On peak EIRP and Refsens budgets

**Discussion:**

.

**Decision: Noted.**

**R4-2007106 On power class definition for FR2 FWA UE**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

We provide our explanation on the need for defininf the new UE power class related to this new WI.

**Discussion:**

.

**Decision: Noted.**

**R4-2007110 UE RF requirements for new FR2 FWA use case**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2008006 Power class on new FR2 FWA UE**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

new power class is proposed.

**Discussion:**

.

**Decision: Noted.**

**R4-2008007 Beam correspondence requirement on FR2 FWA UE**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

BC bit-0 should not be allowed for FWA

**Discussion:**

.

**Decision: Noted.**

**R4-2008008 Multiband relaxation for FWA UE**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

MBR shall not be larger than PC3

**Discussion:**

.

**Decision: Noted.**

**R4-2008175 on new FR2 FWA UE requirement**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008274 New power class feature for FWA**

*Type: other For: (not specified)  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Noted.**

#### 10.1.2 BS RF (38.104) [NR\_FR2\_FWA\_Bn257\_Bn258]

#### 10.1.4 Others [NR\_FR2\_FWA\_Bn257\_Bn258]

### 10.2 Introduction of NR band n13 [NR\_n13]

**R4-2008327           Email discussion summary for [95e][137] NR\_n13**

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

**Discussion:**

.

**Decision: Revised to R4-2008965 (from R4-2008327).**

**R4-2008965           Email discussion summary for [95e][137] NR\_n13**

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

**Discussion:**

.

**Decision: Return to.**

#### 10.2.1 UE RF (38.101-1) [NR\_n13-Core]

**R4-2007311 Draft CR to TS 38.101-1: introduction of NR band n13**

*Type: draftCR For: Endorsement  
 38.101-1 v16.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2008209 n13 AMPR**

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

**Discussion:**

.

**Decision: Noted.**

#### 10.2.2 BS RF (38.104) [NR\_n13-Core]

**R4-2007312 Draft CR to TS 38.104: introduction of NR band n13**

*Type: draftCR For: Endorsement  
 38.104 v16.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008923 (from R4-2007312).**

**R4-2008923 Draft CR to TS 38.104: introduction of NR band n13**

*Type: draftCR For: Endorsement  
 38.104 v16.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

#### 10.2.3 RRM (38.133) [NR\_n13-Core]

#### 10.2.4 Others [NR\_n13-Core/Perf]

### 11.0 Reply to ITU-R LS (RP-200042)

### 11.1 Study on IMT parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz [FS\_6425\_10500MHz \_NR]

**GTW session on May 29:**

[95e][138] FS\_6425\_10500MHz\_NR : Antenna parameters

The discussion was based on a draft doc prepared by moderator “Status and WF on BS antenna parameters in response to ITU-R LS” shared in the online draft folder. The agreement was captured in the version “Status and WF on BS antenna parameters in response to ITU-R LS - GTW”, in which pages 4, 6, 7, 8, 9 were agreed. This version was shared in the online draft folder.

**R4-2008328           Email discussion summary for [95e][138] FS\_6425\_10500MHz \_NR**

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

**Discussion:**

.

**Decision: Revised to R4-2008966 (from R4-2008328).**

**R4-2008966           Email discussion summary for [95e][138] FS\_6425\_10500MHz \_NR**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2008924           Draft LS to Parameters of terrestrial component of IMT for sharing and compatibility studies in preparation for WRC-23 (below 5 GHz)**

*Type: LS out For: Approval  
 to ITU-R WP5D  
 Source: Ericsson*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008925           WF on BS and UE IMT parameters for the SI on 6.425-7.125GHz and 10.0-10.5GHz**

*Type: others For: Approval*

*Source: CATT*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008926           WF on BS Antenna parameters for the SI on 6.425-7.125GHz and 10.0-10.5GHz**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008927           WF on Simulation Assumptions for the SI on 6.425-7.125GHz and 10.0-10.5GHz**

*Type: others For: Approval*

*Source:*

**Discussion:**

.

**Decision:                    Return to.**

#### 11.1.1 UE parameters

**R4-2006286 BS parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2007306 UE IMT technology related parameters**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2007511 SI on IMT parameters - UE parameters for 6.425-7.025GHz / 7.025-7.125 / 10.0 – 10.5 GHz**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is discussing and proposing the remaining UE parameters values for the SI on IMT parameters

**Discussion:**

.

**Decision: Noted.**

**R4-2007514 TP to TR for SI on IMT parameters - UE parameters**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This TP to TR (on the SI on IMT parameters) captures the current agreements made on UE parameters

**Discussion:**

.

**Decision: Noted.**

#### 11.1.2 BS parameters

**R4-2006287 UE parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2007307 BS IMT technology related parameters**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2007510 SI on IMT parameters - BS parameters for 6.425-7.025GHz / 7.025-7.125 / 10.0 – 10.5 GHz**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is discussing and proposing the remaining BS parameters values for the SI on IMT parameters

**Discussion:**

.

**Decision: Noted.**

**R4-2007513 TP to TR for SI on IMT parameters - BS parameters**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This TP to TR (on the SI on IMT parameters) captures the current agreements made on BS parameters

**Discussion:**

.

**Decision: Noted.**

#### 11.1.3 Coexistence study

**R4-2006107 TP to TR 38.9xx: System level simulation methodology and assumptions for study on IMT parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides proposals to finalize the simulation assumptions of the BS noise figure at 7GHz and the uplink transmission power control model, and a TP to record the system level simulation methodology and assumptions in the agreed TR skeleto

**Discussion:**

.

**Decision: Revised to R4-2008928 (from R4-2006107).**

**R4-2008928 TP to TR 38.9xx: System level simulation methodology and assumptions for study on IMT parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides proposals to finalize the simulation assumptions of the BS noise figure at 7GHz and the uplink transmission power control model, and a TP to record the system level simulation methodology and assumptions in the agreed TR skeleto

**Discussion:**

.

**Decision: Return to.**

**R4-2006108 Urban Macro Downlink Coexistence Simulation Results for Frequency Ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: other For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides the urban macro downlink coexistence simulation results according to the agreed assumptions.

**Discussion:**

.

**Decision: Noted.**

**R4-2006109 Indoor Downlink Coexistence Simulation Results for Frequency Ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: other For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides the indoor downlink coexistence simulation results according to the agreed assumptions.

**Discussion:**

.

**Decision: Noted.**

**R4-2007308 TP on co-existence simulation assumption on 6.425-7.125GHz and 10.0-10.5GHz**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2007394 Discussion on simulation assumption for 6425-7125MHz and 10-10.5GHz**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2007395 Simulation results for 6425-7125MHz and 10-10.5GHz**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2007509 SI on IMT parameters - simulation assumptions**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is proposing the remaining assumptions for the system simulations needed for the SI on IMT parameters

**Discussion:**

.

**Decision: Noted.**

**R4-2007512 TP to TR for SI on IMT parameters - simulation assumptions**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This TP to TR (on the SI on IMT parameters) captures the current agreements made on simulation assumptions

**Discussion:**

.

**Decision: Noted.**

**R4-2008095 Dense Urban Downlink Coexistence Simulation Results for Frequency Ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: other For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides the dense urban downlink coexistence simulation results according to the agreed assumptions.

**Discussion:**

.

**Decision: Noted.**

#### 11.1.4 Antenna characteristics

**R4-2006110 AAS BS antenna characteristics for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides proposals to decide on the FFS AAS BS antenna parameters in the agreed WF for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz.

**Discussion:**

.

**Decision: Noted.**

**R4-2006288 Antenna characteristics**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2006924 Array antenna model parameters**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we present representable AAS array antenna parameter sets for in ITU-R WP 5D given deployments scenarios. This information in this contribution is relevant for frequency range below 6 GHz as well below 10 GHz, hence the contribution i

**Discussion:**

.

**Decision: Noted.**

**R4-2007309 Antenna characteristics on 6.425-7.025GHz, 7.025-7.125GHz and 10.0-10.5 GHz**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2007393 Discussion on NR BS antenna parameters**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Noted.**

### 11.2 Reply of IMT parameters for other frequency ranges requested in RP-200042

**R4-2006111 AAS BS antenna characteristics for frequency ranges below 6GHz**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides proposals to decide on the FFS AAS BS antenna parameters in the agreed WF for frequency ranges below 6 GHz.

**Discussion:**

.

**Decision: Noted.**

**R4-2006289 Open issue on IMT parameters for other frequency ranges below 6GHz**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2006761 discussion on the remaining issues for IMT parameters below 6GHz spectrum**

*Type: discussion For: Approval  
 Source: CMCC*

**Discussion:**

.

**Decision: Noted.**

**R4-2006923 Array antenna model parameters**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we present representable AAS array antenna parameter sets for in ITU-R WP 5D given deployments scenarios. This information in this contribution is relevant for frequency range below 6 GHz as well below 10 GHz, hence the contribution i

**Discussion:**

.

**Decision: Noted.**

**R4-2007089 Reply of IMT parameters for frequency ranges below 6GHz**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2007310 IMT parameters for other frequency ranges below 5 GHz**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008111 Draft LS to Parameters of terrestrial component of IMT for sharing and compatibility studies in preparation for WRC-23 (below 6 GHz)**

*Type: LS out For: Approval  
 to ITU-R WP5D  
 Source: Ericsson*

**Abstract:**

The LS is a proposal for response to the ITU-R request for IMT parameters.

**Discussion:**

.

**Decision: Noted.**

## 12 LTE maintenance (up to Rel15) [WI code or TEI]

### 12.2 UE RF [WI code or TEI]

**R4-2006445 NBIOT standalone operation for FCC regulation considerations**

*Type: discussion For: Discussion  
 36.101 v..  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2006446 CR for TS 36.101: CR for category NB1 against FCC regulation in standalone mode**

*Type: CR For: Agreement  
 36.101 v14.14.0 CR-5609 Cat: F (Rel-14)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Return to.**

**R4-2006447 CR for TS 36.101: CR for category NB1 against FCC regulation in standalone mode**

*Type: CR For: Agreement  
 36.101 v15.10.0 CR-5610 Cat: A (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

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

**R4-2006448 CR for TS 36.101: CR for category NB1 against FCC regulation in standalone mode**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5611 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

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

**R4-2006449 CR for TS 36.101: CR for spec corrections for MSD table**

*Type: CR For: Agreement  
 36.101 v15.10.0 CR-5612 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006450 CR for TS 36.101: CR for spec corrections for MSD table**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5613 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006599 Corrections of CA band combo table**

*Type: CR For: Agreement  
 36.101 v15.10.0 CR-5614 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

CA bands are corrected

**Discussion:**

.

**Decision: Agreed.**

**R4-2006600 Corrections of CA band combo table**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5615 Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

CA bands are corrected

**Discussion:**

.

**Decision: Agreed.**

**R4-2006651 CR for 36.101: fix modifiedMPRbehavior for NS\_31**

*Type: CR For: Agreement  
 36.101 v14.14.0 CR-5616 Cat: F (Rel-14)  
  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006652 CR for 36.101: fix modifiedMPRbehavior for NS\_31**

*Type: CR For: Agreement  
 36.101 v15.10.0 CR-5617 Cat: F (Rel-15)  
  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Agreed.**

**R4-2006653 Mirror CR for 36.101: fix modifiedMPRbehavior for NS\_31**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5618 Cat: A (Rel-16)  
  
 Source: T-Mobile USA*

**Discussion:**

.

**Decision: Agreed.**

**R4-2007564 Exclusion 100KHz for NB-IoT to meet FCC band-edge requirements**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2007589 CR to remove TBD and braket on CAT-M2**

*Type: CR For: Agreement  
 36.101 v14.14.0 CR-5634 Cat: F (Rel-14)  
  
 Source: Ericsson*

**Abstract:**

The TBD and bracket related to CAT-M2 is removed

**Discussion:**

.

**Decision: Agreed.**

**R4-2007590 CR to remove TBD and braket on CAT-M2 Type A for Rel-15**

*Type: CR For: Agreement  
 36.101 v15.10.0 CR-5635 Cat: A (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

The TBD and bracket related to CAT-M2 is removed

**Discussion:**

.

**Decision: Agreed.**

**R4-2007591 CR to remove TBD and braket on CAT-M2 Type A for Rel-16**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5636 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

The TBD and bracket related to CAT-M2 is removed

**Discussion:**

.

**Decision: Agreed.**

**R4-2008181 CR for 36.101 MPR for cat-NB Rel-13**

*Type: CR For: Agreement  
 36.101 v13.18.0 CR-5642 Cat: F (Rel-13)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2008973 (from R4-2008181).**

**R4-2008973 CR for 36.101 MPR for cat-NB Rel-13**

*Type: CR For: Agreement  
 36.101 v13.18.0 CR-5642 Cat: F (Rel-13)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008182 CR for 36.101 MPR for cat-NB Rel-14**

*Type: CR For: Agreement  
 36.101 v14.14.0 CR-5643 Cat: A (Rel-14)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008183 CR for 36.101 MPR for cat-NB Rel-15**

*Type: CR For: Agreement  
 36.101 v15.10.0 CR-5644 Cat: A (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008184 CR for 36.101 MPR for cat-NB Rel-16**

*Type: CR For: Agreement  
 36.101 v16.5.0 CR-5645 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2008275 on cat-NB MPR for 3 tones and 6 tones allocation**

*Type: other For: (not specified)  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

## 13 Liaison and output to other groups

**R4-2006570 Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2**

*Type: LS out For: Approval  
 to RAN2  
 Source: Intel Corporation*

**Discussion:**

.

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

**R4-2006625 Draft Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2 (R2-2004267)**

*Type: LS out For: Approval  
 to RAN2  
 Source: Apple*

**Abstract:**

Draft Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2 (R2-2004267)

**Discussion:**

.

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

## 14 Revision of the Work Plan

### 14.1 Simplification of band combinations in RAN4 specifications

**R4-2008329           Email discussion summary for [95e][139] BC\_simplification**

*Type: other For: Information  
 Source: Moderator (NTT DOCOMO)*

**Discussion:**

.

**Decision: Revised to R4-2008967 (from R4-2008329).**

**R4-2008967           Email discussion summary for [95e][139] BC\_simplification**

*Type: other For: Information  
 Source: Moderator (NTT DOCOMO)*

**Discussion:**

.

**Decision: Return to.**

**R4-2008929           WF on refinement on excel format for band combinations**

*Type: others For: Approval*

*Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2008930           WF on simplification on band combinations in specification**

*Type: others For: Approval*

*Source: ZTE*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2006626 Simplification of band combination tables in 38.101**

*Type: discussion For: Approval  
 Source: Apple*

**Abstract:**

This paper proposes to use Excel for replacing the band combinations tables in 38.101

**Discussion:**

.

**Decision: Noted.**

**R4-2006734 Discussion about Band combination spreadsheet formats**

*Type: discussion For: Approval  
 Source: Futurewei*

**Discussion:**

.

**Decision: Noted.**

**R4-2006840 Considerations on simplification of EN-DC configuration including FR2**

*Type: discussion For: Approval  
 Source: ZTE Corporation*

**Abstract:**

Considerations on simplification of EN-DC configuration including FR2

**Discussion:**

.

**Decision: Noted.**

**R4-2008064 On new format for band combinations**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2008085 Further discussion on improvement of request, SR and BC basket WID index table**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2008112 Simplification of band combinations**

*Type: other For: (not specified)  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Revised to R4-2008931 (from R4-2008112).**

**R4-2008931 Simplification of band combinations**

*Type: other For: (not specified)  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Return to.**

### 14.2 R17 new proposals

#### 14.2.1 Basket WI approach for adding existing channel bandwidth on existing NR bands

**R4-2006933 UE bandwidths for SUL bands**

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

**Discussion:**

.

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

**R4-2007516 Motivation slides for the new basket WI adding existing channel BW support and the proposals included**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution motivates the new basket WI on adding new channel BW in existing NR bands, and also the 2 proposals already included in this basket WI

**Discussion:**

.

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

**R4-2007517 New basket WI adding existing channel BW support in existing NR bands**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

New basket WID to manage more efficiently all requests related to adding channel bandwidth(s) support in existing NR bands. 2 such proposals are included.

**Discussion:**

.

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

**R4-2008250 Re-consideration of adding UE 100MHz channel bandwidth for n40**

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

**Abstract:**

Propose to add 100MHz channel bandwidth for n40.

**Discussion:**

.

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

#### 14.2.2 Proposals on adding brand new channel bandwidth

**R4-2006339 Non-standard spectrum allocations for NR bands**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Discussion:**

.

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

**R4-2006640 New SID: Efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidths**

*Type: SID new For: Decision  
 Source: T-Mobile USA*

**Discussion:**

.

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

**R4-2006641 Motivation for new SID on Efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidths**

*Type: discussion For: Information  
 Source: T-Mobile USA*

**Discussion:**

.

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

**R4-2006642 On efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidths**

*Type: discussion For: Information  
 Source: T-Mobile USA*

**Discussion:**

.

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

**R4-2006812 Discussion on scalable solutions to handle brand new channel bandwidth**

*Type: discussion For: Discussion  
 Source: CMCC*

**Discussion:**

.

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

**R4-2008247 New WID proposal: introduction of brand new channel bandwidths for NR**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Abstract:**

New WID for brand new channel bandwidth for NR.

**Discussion:**

.

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

#### 14.2.3 Basket WIs for LTE CA, EN-DC, NR CA and NR DC

**R4-2006299 Rel-17 NR inter-band CA for 3 bands DL with 1 band UL**

*Type: WID new For: Decision  
 Source: CATT*

**Discussion:**

.

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

**R4-2006736 New WID onon LTE x bands (xDL/1UL x=1.2,3,4) with NR 2 bands (2DL/1UL) EN DC in Rel-17**

*Type: WID new For: Decision  
 Source: LG Electronics France*

**Discussion:**

.

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

**R4-2006793 New WID on LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL in Rel-17**

*Type: WID new For: Decision  
 Source: LG Electronics Polska*

**Discussion:**

.

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

**R4-2006802 Proposal on new Rel-17 Basket: NR inter-band Carrier Aggregation and Dual connectivity for DL 4 bands and 2UL bands**

*Type: WID new For: Decision  
 Source: Samsung*

**Discussion:**

.

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

**R4-2006898 New WID on Rel.17 EN-DC and NE-DC for 2 bands DL with 2 bands UL (1 LTE band + 1 NR band)**

*Type: WID new For: Decision  
 Source: CHTTL*

**Discussion:**

.

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

**R4-2006930 New WID on Power Class 2 UE for NR inter-band CA and SUL band combination with 2 bands UL**

*Type: WID new For: Decision  
 Source: China Telecom*

**Discussion:**

.

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

**R4-2006991 New WID: Dual Connectivity (EN-DC) of LTE inter-band CA xDL/1UL bands (x=2,3,4) and NR FR1 1DL/1UL band and NR FR2 1DL/1UL band**

*Type: WID new For: Decision  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

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

**R4-2007016 Proposed new WID on Rel-17 EN-DC of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and 3 bands NR inter-band CA (3DL/1UL)**

*Type: WID new For: Decision  
 Source: ZTE Corporation*

**Discussion:**

.

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

**R4-2007017 Proposed new WID on Rel-17 NR Inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1,2)**

*Type: WID new For: Decision  
 Source: ZTE Corporation*

**Discussion:**

.

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

**R4-2007018 Proposed new WID on Rel-17 Dual Connectivity (EN-DC) with 3 bands DL and 3 bands UL**

*Type: WID new For: Decision  
 Source: ZTE Corporation*

**Discussion:**

.

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

**R4-2007169 Draft Rel-17 WID on Dual Connectivity (EN-DC) of 4 bands LTE inter-band CA (4DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID new For: Decision  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

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

**R4-2007340 New Rel-17 WID: Dual Connectivity (EN-DC) of 2 bands LTE inter-band CA (2DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID new For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2007499 Rel-17 WID on Dual Connectivity (DC) of 4 bands LTE inter-band CA (4DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID new For: Decision  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

New WID capturing combinations requested for the RAN4#95 meeting

**Discussion:**

.

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

**R4-2007559 Proposed new WID on Rel-17 NR Inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with 2 bands UL**

*Type: WID new For: Decision  
 Source: ZTE Corporation*

**Discussion:**

.

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

**R4-2007565 New WID: Rel17 LTE inter-band CA for 2 bands DL with 1 band UL**

*Type: WID new For: Decision  
 Source: Qualcomm Incorporated*

**Discussion:**

.

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

**R4-2008061 New WID: LTE Advanced inter-band CA Rel-17 for x bands DL (x=4, 5) with 1 band UL**

*Type: WID new For: Decision  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

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

**R4-2008087 New WI Rel-17 on Band combinations for SA NR Supplementary uplink (SUL), NSA NR SUL, NSA NR SUL with UL sharing from the UE perspective (ULSUP)**

*Type: WID new For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2008088 New WI Rel-17 NR inter-band CA for 5 bands DL with x bands UL (x=1, 2)**

*Type: WID new For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2008186 new WID: Rel-17 LTE inter-band CA for 3 bands DL with 1 band UL**

*Type: WID new For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2008236 New WID for Rel-17 LTE inter-band CA for 2 bands DL with 2 bands UL**

*Type: WID new For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

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

**R4-2007600 New WID Basket WI for LTE Intra-band CA Rel-17**

*Type: WID new For: Decision  
 Source: Ericsson*

**Abstract:**

New WID Basket WI for LTE Intra-band CA Rel-17

**Discussion:**

.

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

**R4-2007601 New WID NR Intra-band Rel-17**

*Type: WID new For: Decision  
 Source: Ericsson*

**Abstract:**

New WID NR Intra-band Rel-17

**Discussion:**

.

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

**R4-2007602 New WID LTE 3DL and one NR band Rel-17**

*Type: WID new For: Decision  
 Source: Ericsson*

**Abstract:**

New WID LTE 3DL and one NR band Rel-17

**Discussion:**

.

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

**R4-2007603 New WID 4 bands NR CA Rel-17**

*Type: WID new For: Decision  
 Source: Ericsson*

**Abstract:**

New WID 4 bands NR CA Rel-17

**Discussion:**

.

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

**R4-2007587 New WID on Additional LTE bands for UE category M1 and\_or NB1 in Rel-17**

*Type: WID new For: Decision  
 Source: Ericsson*

**Abstract:**

new WID for basket work item to add NB1 and M1 is proposed

**Discussion:**

.

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

**R4-2007588 New WID on Additional LTE bands for UE category M2 and\_or NB2 in Rel-17**

*Type: WID new For: Decision  
 Source: Ericsson*

**Abstract:**

new WID for basket work item to add NB2 and M2 is proposed

**Discussion:**

.

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

#### 14.2.4 Others

**R4-2006042 Motivation for further enhancement on NR demodulation performance requirements**

*Type: discussion For: Information  
 Source: China Telecom*

**Discussion:**

.

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

**R4-2006043 Draft WID: Further enhancement on NR demodulation performance requirements**

*Type: discussion For: Information  
 Source: China Telecom*

**Discussion:**

.

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

**R4-2006091 New WID proposal: Modification of LTE Band 24 specifications to comply with updated regulatory emission limits**

*Type: WID new For: Decision  
 Source: Ligado Networks*

**Abstract:**

WI proposal for modifying Band 24 RF specifications to comply with recent regulatory updates

**Discussion:**

.

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

**R4-2006139 New WID proposal for Introduction of NR band n24**

*Type: WID new For: Decision  
 Source: Ligado Networks*

**Abstract:**

Introduction of NR Band n24

**Discussion:**

.

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

**R4-2006140 New WID: introduction of NR 47 GHz band**

*Type: WID new For: Decision  
 Source: T-Mobile USA Inc., Dish Network*

**Abstract:**

The US FCC had auctioned the 47 GHz band (47.2-48.2 GHz.) It should be standardized as a 3GPP FR2 operating band.

**Discussion:**

.

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

**R4-2006201 Motivation paper on Rel-17 further RRM enhancement**

*Type: discussion For: Information  
 38.133 v..  
 Source: Apple*

**Discussion:**

.

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

**R4-2006202 WID of R17 NR RRM further enhancement**

*Type: discussion For: Information  
 38.133 v..  
 Source: Apple*

**Discussion:**

.

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

**R4-2006292 Study on support of unsynchronized operation between TDD bands**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

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

**R4-2006300 Motivation on NR RRM requirement enhancement in Rel-17**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

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

**R4-2006301 New WID on NR RRM requirement enhancement in Rel-17**

*Type: WID new For: Decision  
 Source: CATT*

**Discussion:**

.

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

**R4-2006302 Motivation on basket WI on V2X band combination**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

.

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

**R4-2006303 New basket WID: V2X band combination for supporting co-current operation between Uu frequency bands and V2X bands**

*Type: WID new For: Decision  
 Source: CATT*

**Discussion:**

.

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

**R4-2006309 New WID on Verification of Multiple Input Multiple Output (MIMO) Over-the-Air (OTA) performance of NR UEs**

*Type: WID new For: Decision  
 Source: CAICT*

**Abstract:**

Follow-up WID of Rel-16 NR MIMO OTA SI

**Discussion:**

.

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

**R4-2006362 Further views on NR FR1 TRP/TRS**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Discussion:**

.

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

**R4-2006363 FR2 RF enhancements for Rel-17**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Discussion:**

.

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

**R4-2006480 Motivation paper on R17 RRM enh**

*Type: other For: Information  
 Source: MediaTek inc.*

**Discussion:**

.

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

**R4-2006549 Motivation to introduce new SI of MG enhancement**

*Type: other For: Information  
 Source: Intel Corporation, Apple*

**Discussion:**

.

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

**R4-2006550 New SI Proposal Study on measurement gap enhancement**

*Type: other For: Information  
 Source: Intel Corporation, Apple*

**Discussion:**

.

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

**R4-2006683 New SID on high-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12 and in Band 5**

*Type: SID new For: Decision  
 Source: US Cellular Corporation*

**Abstract:**

Support for fixed wireless and vehicle mounted user equipment usage scenarios, with broader rural coverage and higher data rates is envisioned as part of deployment configurations in LTE band 12 and band 5. Improvements in coverage, and availability.

**Discussion:**

.

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

**R4-2006710 Motivation on NR RRM requirement for UE different RX beam sets in FR2**

*Type: discussion For: Discussion  
 Source: LG Electronics Inc.*

**Abstract:**

It is motivation paper to introduce new WID on NR RRM requirement for UE different RX beam sets in FR2.

**Discussion:**

.

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

**R4-2006739 New WID proposal on introduction of 1.6 GHz NR SUL band with same uplink frequency range of Band 24**

*Type: WID new For: Decision  
 Source: Ligado Networks*

**Abstract:**

A new WID to standardize the UL of Band 24 as a supplemental uplink band.

**Discussion:**

.

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

**R4-2006753 Motivation for new WI on air-to-ground network for NR**

*Type: WID new For: Decision  
 Source: CMCC*

**Discussion:**

.

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

**R4-2006754 New WID on air-to-ground network for NR**

*Type: WID new For: Decision  
 Source: CMCC*

**Discussion:**

.

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

**R4-2006755 New WID on introduction of 1880-1920MHz SUL band for NR**

*Type: WID new For: Decision  
 Source: CMCC*

**Discussion:**

.

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

**R4-2006756 New WID on introduction of 2300-2400MHz SUL band for NR**

*Type: WID new For: Decision  
 Source: CMCC*

**Discussion:**

.

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

**R4-2006899 Motivation for WI: Verification of Multiple Input Multiple Output (MIMO) Over-the-Air (OTA) performance of NR UEs**

*Type: discussion For: Information  
 Source: CAICT*

**Discussion:**

.

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

**R4-2007069 New SID on NR FR1 and EN-DC FR1 UE TRP and TRS**

*Type: SID new For: Decision  
 Source: OPPO*

**Discussion:**

.

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

**R4-2007070 Motivation of NR FR1 TRP TRS new study item**

*Type: discussion For: Information  
 Source: OPPO*

**Discussion:**

.

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

**R4-2007257 New WID on UE performance for advanced recevier with soft IC for inter-stream interference and IRC for inter-cell interference**

*Type: WID new For: Decision  
 Source: Huawei, HiSilicon*

**Abstract:**

WID on advanced receiver for soft IC and IRC.

**Discussion:**

.

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

**R4-2007258 Motivation paper of new WID on UE performance for advanced recevier with soft IC for inter-stream interference and IRC for inter-cell interference**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Abstract:**

Motivation paper for soft IC receiver and IRC recevier

**Discussion:**

.

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

**R4-2007361 LTE/NR spectrum sharing in Band 38/n38**

*Type: discussion For: Information  
 Source: VODAFONE Group Plc*

**Discussion:**

.

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

**R4-2008128 New WID: FR1/FR2 for NR based HAPS networks**

*Type: WID new For: Decision  
 Source: Intelsat LLC, Loon LLC, Google Inc.*

**Discussion:**

.

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

**R4-2008248 New WID proposal: supporting overlapping CA for LTE**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Abstract:**

New WID for overlapping CA for LTE.

**Discussion:**

.

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

**R4-2008249 Motivation on WID of further enhancement of FR1 RF requirement**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Abstract:**

Propose for Rel-17 FR1 enhancement WID.

**Discussion:**

.

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

**R4-2008268 [draft] New SID: Optimizations on power class fall back**

*Type: SID new For: Decision  
 Source: vivo*

**Discussion:**

.

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

**R4-2008269 Consideration on NR SISO OTA WI**

*Type: discussion For: Discussion  
 Source: vivo*

**Discussion:**

.

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

**R4-2008270 Motivation for NR FR1 UE TRP and TRS**

*Type: discussion For: Discussion  
 Source: vivo, CMCC, CAICT, Rohde & Schwarz*

**Discussion:**

.

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

**R4-2008271 New WID: NR FR1 UE SA and EN-DC TRP and TRS**

*Type: WID new For: Decision  
 Source: vivo, CMCC, CAICT, Rohde & Schwarz*

**Discussion:**

.

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

**R4-2006613 FR2 for NR based Satellite networks**

*Type: WID new For: Decision  
 Source: HUGHES Network Systems Ltd*

**Discussion:**

.

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

**R4-2006894 Possible bands for NR based satellite networks**

*Type: discussion For: Information  
 Source: THALES, HUGHES Network Systems Ltd, Intelsat*

**Discussion:**

.

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

**R4-2007938 FR1**

*Type: WID new For: Decision  
 Source: Intelsat*

**Discussion:**

.

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

**R4-2008142 FR1/FR2**

*Type: WID new For: Decision  
 Source: Intelsat*

**Discussion:**

.

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

**R4-2006844 LTE / NR Spectrum sharing in Band 40/n40**

*Type: discussion For: Agreement  
 Source: Reliance Jio*

**Abstract:**

LTE / NR Spectrum sharing in Band 40/n40

**Discussion:**

.

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

### 14.3 Others

## 15 Any other business

### 15.1 Views on workload management and meeting efficiency improvement

**R4-2008003 Proposals for Managing RAN4 work load**

*Type: other For: Approval  
 Source: Ericsson, Nokia, Nokia Shanghai Bell, ZTE, Mediatek, Qualcomm, Verizon, AT&T, T-Mobile, Softbank, KDDI, NTT DoCoMo, Rohde & Schwarz, KT, SKT*

**Abstract:**

This document contains proposals for managing RAN4 work load by reducing and avoiding redundant contributions. The proposals are applicable fot both F2F and e-meetings

**Discussion:**

.

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

**R4-2008004 Proposals to improve e-meeting efficiency**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This document contains proposals for improving efficiency in e-meetings.

**Discussion:**

.

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

**R4-2008060 Views on workload management and meeting efficiency improvement**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

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

**R4-2006663 Consideration on potential e-meeting improvement**

*Type: discussion For: Discussion  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

.

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

### 15.2 Others

## 16 Close of the E-meeting