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

**DRAFT Meeting Report  
for  
TSG RAN WG4  
meeting: 96-e**

**Electronic Meeting, Online, 17/08/2020 to 28/08/2020**

Report generated on Monday, 2020-08-10 13:10 UTC

Contents:

1 Opening of the E-meeting 11

2 Approval of the agenda 12

3 Letters / reports from other groups / meetings 12

4 Rel-15 New radio access technology 17

4.1 System Parameters Maintenance [NR\_newRAT-Core] 18

4.2 UE RF requirements maintenance [NR\_newRAT] 21

4.2.1 [FR1] Maintenance for 38.101-1 [NR\_newRAT-Core] 22

4.2.1.1 Maintenance for Transmitter characteristics [NR\_newRAT-Core] 23

4.2.1.2 Maintenance for Receiver characteristics [NR\_newRAT-Core] 27

4.2.2 [FR2] Maintenance for 38.101-2 [NR\_newRAT-Core] 28

4.2.2.1 Regulatory Tx/Rx spurious emission limits handling [NR\_newRAT-Core] 29

4.2.2.2 Maintenance for Transmitter characteristics [NR\_newRAT-Core] 32

4.2.2.3 Maintenance for Receiver characteristics [NR\_newRAT-Core] 34

4.2.3 Maintenance for 38.101-3 [NR\_newRAT-Core] 34

4.2.3.1 [FR1] Maintenance for Transmitter characteristics within FR1 [NR\_newRAT-Core] 35

4.2.3.2 [FR1+FR2] Maintenance for Transmitter characteristics involving both FR1 and FR2 [NR\_newRAT-Core] 36

4.2.3.3 [FR1] Maintenance for Receiver characteristics within FR1 [NR\_newRAT-Core] 36

4.2.3.4 [FR1+FR2] Maintenance for Receiver characteristics involving both FR1 and FR2 [NR\_newRAT-Core] 40

4.3 UE EMC [NR\_newRAT-Core] 40

4.3.1 General [NR\_newRAT-Core] 40

4.3.2 Emission requirements [NR\_newRAT-Core] 40

4.3.3 Immunity requirements [NR\_newRAT-Core] 41

4.4 BS RF [NR\_newRAT-Core] 41

4.4.1 General [NR\_newRAT-Core] 41

4.4.2 Transmitter characteristics maintenance [NR\_newRAT-Core] 41

4.4.3 Receiver characteristics maintenance [NR\_newRAT-Core] 41

4.5 BS conformance testing [NR\_newRAT-Perf] 44

4.5.1 General [NR\_newRAT-Perf] 44

4.5.2 BS specifications clean-ups (including conformance testing and core) [NR\_newRAT-Perf/Core] 45

4.5.2.1 eAAS specifications [NR\_newRAT-Perf/Core] 45

4.5.2.2 MSR specifications [NR\_newRAT-Perf/Core] 46

4.5.2.3 NR conformance testing specifications [NR\_newRAT-Perf] 46

4.5.3 Conducted conformance testing (38.141-1) [NR\_newRAT-Perf] 46

4.5.4 Radiated conformance testing (38.141-2) [NR\_newRAT-Perf] 46

4.6 BS EMC [NR\_newRAT-Core] 50

4.6.1 Core requirements [NR\_newRAT-Core] 50

4.6.1.1 Emission requirements [NR\_newRAT-Core] 50

4.6.1.2 Immunity requirements [NR\_newRAT-Core] 50

4.6.2 Performance requirements [NR\_newRAT-Perf] 50

4.7 RRM core requirements maintenance (38.133/36.133) [NR\_newRAT-Core] 50

4.7.1 UE measurement capability (38.133/36.133) [NR\_newRAT-Core] 50

4.7.2 Connected state mobility (38.133/36.133) [NR\_newRAT-Core] 52

4.7.3 Signaling characteristics (38.133/36.133) [NR\_newRAT-Core] 52

4.7.4 Other requirements [NR\_newRAT-Core] 56

4.8 RRM perf. requirements maintenance (38.133/36.133) [NR\_newRAT-Perf] 58

4.8.1 General [NR\_newRAT-Perf] 58

4.8.2 RRM test cases [NR\_newRAT-Perf] 59

4.9 Demodulation and CSI requirements maintenance (38.101-4/38.104) [NR\_newRAT-Perf] 73

4.9.1 UE demodulation requirements [NR\_newRAT-Perf] 73

4.9.2 CSI requirements [NR\_newRAT-Perf] 74

4.9.3 BS demodulation requirements [NR\_newRAT-Perf] 75

4.10 Positioning specs maintenance (36.171, 37.171 and 38.171) [NR\_newRAT-Perf or TEI] 75

4.11 Testability Maintenance (38.810) [FS\_NR\_test\_methods] 75

5 LTE maintenance (up to Rel15) [WI code or TEI] 76

5.1 BS RF requirements [WI code or TEI] 76

5.2 UE RF requirements [WI code or TEI] 82

5.3 RRM requirements [WI code or TEI] 84

5.4 Demodulation and CSI requirements [WI code or TEI] 87

5.4.1 UE demodulation and CSI requirements [WI code or TEI] 87

5.4.2 BS demodulation requirements [WI code or TEI] 88

6 Rel-16 Work Items for LTE 88

6.1 Additional MTC enhancements for LTE [LTE\_eMTC5] 88

6.1.1 Core requirements maintenance [LTE\_eMTC5-Core] 88

6.1.1.1 RF [LTE\_eMTC5-Core] 88

6.1.1.2 RRM [LTE\_eMTC5-Core] 88

6.1.2 RRM perf. requirements [LTE\_eMTC5-Perf] 89

6.1.2.1 General [LTE\_eMTC5-Perf] 89

6.1.2.2 Test cases [LTE\_eMTC5-Perf] 90

6.1.3 Demodulation and CSI requirements (36.101) [LTE\_eMTC5-Perf] 91

6.1.3.1 UE demodulation requirements [LTE\_eMTC5-Perf] 91

6.1.3.2 CSI requirements [LTE\_eMTC5-Perf] 92

6.2 Additional enhancements for NB-IoT [NB\_IOTenh3] 92

6.2.1 Core requirements maintenance [NB\_IOTenh3-Core] 92

6.2.1.1 RF [NB\_IOTenh3-Core] 92

6.2.1.2 RRM [NB\_IOTenh3-Core] 92

6.2.2 RRM perf. requirements [NB\_IOTenh3-Perf] 93

6.2.2.1 General [LTE\_eMTC5-Perf] 93

6.2.2.2 Test cases [LTE\_eMTC5-Perf] 93

6.2.3 Demodulation and CSI requirements (36.101/36.104) [NB\_IOTenh3-Perf] 93

6.2.3.1 UE demodulation requirements [NB\_IOTenh3-Perf] 93

6.2.3.2 BS demodulation requirements [NB\_IOTenh3-Perf] 94

6.3 Even further Mobility enhancement in E-UTRAN [LTE\_feMob] 96

6.3.1 RRM core requirements maintenance [LTE\_feMob-Core] 96

6.3.2 RRM perf. requirements [LTE\_feMob-Perf] 96

6.3.2.1 General [LTE\_feMob-Perf] 96

6.3.2.2 Test cases [LTE\_feMob-Perf] 96

6.4 LTE-based 5G terrestrial broadcast [LTE\_terr\_bcast] 97

6.4.1 Demodulation and CSI requirements (36.101) [LTE\_terr\_bcast -Perf] 97

6.4.2 Others [LTE\_terr\_bcast -Core/Perf] 97

6.5 R16 LTE maintenance [WI code] 98

6.5.1 BS RF requirements [WI code] 98

6.5.2 UE RF requirements [WI code] 98

6.5.3 RRM [WI code] 100

6.5.4 Demodulation and CSI requirements [WI code] 100

6.5.4.1 UE demodulation and CSI requirements [WI code] 100

6.5.4.2 BS demodulation requirements [WI code] 100

7 Rel-16 UE feature list 100

7.1 NR-based access to unlicensed spectrum [NR\_unlic] 100

7.1.1 System Parameters [NR\_unlic-Core] 100

7.1.1.1 Bands and band plans [NR\_unlic-Core] 100

7.1.1.2 Wideband operation related [NR\_unlic-Core] 101

7.1.1.3 Others [NR\_unlic-Core] 101

7.1.2 UE RF requirements [NR\_unlic-Core] 102

7.1.2.1 Transmitter characteristics [NR\_unlic-Core] 103

7.1.2.2 Receiver characteristics [NR\_unlic-Core] 104

7.1.3 Band combination related (Analysis, TPs, etc.) [NR\_unlic-Core] 105

7.1.4 BS RF requirements [NR\_unlic-Core] 105

7.1.4.1 Transmitter characteristics [NR\_unlic-Core] 106

7.1.4.2 Receiver characteristics [NR\_unlic-Core] 106

7.1.5 RRM core requirements (38.133) [NR\_unlic-Core] 107

7.1.5.1 General (specification structure, etc) [NR\_unlic-Core] 107

7.1.5.2 Cell re-selection [NR\_unlic-Core] 107

7.1.5.3 Handover [NR\_unlic-Core] 109

7.1.5.4 RRC connection mobility control [NR\_unlic-Core] 110

7.1.5.5 SCell activation/deactivation (delay and interruption) [NR\_unlic-Core] 111

7.1.5.6 Active TCI state switching [NR\_unlic-Core] 112

7.1.5.7 Active BWP switching [NR\_unlic-Core] 113

7.1.5.8 RLM [NR\_unlic-Core] 114

7.1.5.9 Beam management [NR\_unlic-Core] 115

7.1.5.10 Measurement requirements [NR\_unlic-Core] 116

7.1.5.11 Measurement capability and reporting criteria [NR\_unlic-Core] 118

7.1.5.12 Timing [NR\_unlic-Core] 118

7.1.5.13 Other requirements maintenance [NR\_unlic-Core] 119

7.1.6 Demodulation and CSI requirements (38.101-4/38.104) [NR\_unlic-Perf] 119

7.1.6.1 General [NR\_unlic-Perf] 119

7.1.6.2 UE demodulation requirements [NR\_unlic-Perf] 120

7.1.6.3 CSI requirements [NR\_unlic-Perf] 120

7.1.6.4 BS demodulation requirements [NR\_unlic-Perf] 120

7.2 NR mobility enhancement [NR\_Mob\_enh] 121

7.2.1 RRM core requirements maintenance (38.133) [NR\_Mob\_enh-Core] 121

7.2.2 RRM perf. requirements (38.133) [NR\_Mob\_enh-Perf] 122

7.2.2.1 General [NR\_Mob\_enh-Perf] 122

7.2.2.2 Test cases [NR\_Mob\_enh-Perf] 122

7.3 5G V2X with NR sidelink [5G\_V2X\_NRSL] 123

7.3.1 General [5G\_V2X\_NRSL] 123

7.3.2 System parameters maintenance [5G\_V2X\_NRSL-Core] 124

7.3.3 UE RF requirements maintenance [5G\_V2X\_NRSL-Core] 125

7.3.3.1 Transmitter characteristics [5G\_V2X\_NRSL-Core] 125

7.3.3.2 Receiver characteristics [5G\_V2X\_NRSL-Core] 127

7.3.4 Concurrent operation maintenance (scenarios, requirements, etc) [5G\_V2X\_NRSL-Core] 129

7.3.4.1 Transmitter characteristics [5G\_V2X\_NRSL-Core] 129

7.3.4.2 Receiver characteristics [5G\_V2X\_NRSL-Core] 130

7.3.5 RRM core requirements maintenance (38.133) [5G\_V2X\_NRSL-Core] 130

7.3.6 RRM perf. requirements (38.133) [5G\_V2X\_NRSL-Perf] 132

7.3.6.1 General [5G\_V2X\_NRSL-Perf] 132

7.3.6.2 Test cases [5G\_V2X\_NRSL-Perf] 132

7.3.7 Demodulation and CSI requirements (38.101-4) [5G\_V2X\_NRSL-Perf] 133

7.3.7.1 Work Scope [5G\_V2X\_NRSL-Perf] 133

7.3.7.2 Spec structure [5G\_V2X\_NRSL-Perf] 134

7.3.7.3 Test scenarios [5G\_V2X\_NRSL-Perf] 134

7.4 Integrated Access and Backhaul for NR [NR\_IAB] 135

7.4.1 General [NR\_IAB-Core] 135

7.4.1.1 System parameters [NR\_IAB-Core] 135

7.4.1.2 IAB-MT class [NR\_IAB-Core] 135

7.4.1.3 IAB-MT feature list [NR\_IAB-Core] 136

7.4.1.4 Others [NR\_IAB-Core] 137

7.4.2 RF requirements [NR\_IAB-Core] 137

7.4.2.1 Transmitter characteristics [NR\_IAB-Core] 137

7.4.2.1.1 Tx Power related requirements [NR\_IAB-Core] 137

7.4.2.1.2 Transmitted signal quality [NR\_IAB-Core] 139

7.4.2.1.3 Unwanted emissions [NR\_IAB-Core] 139

7.4.2.1.4 Others [NR\_IAB-Core] 141

7.4.2.2 Receiver characteristics [NR\_IAB-Core] 141

7.4.2.2.1 Sensitivity and dynamic range requirements [NR\_IAB-Core] 141

7.4.2.2.2 In-band selectivity and blocking requirements [NR\_IAB-Core] 142

7.4.2.2.3 Others [NR\_IAB-Core] 143

7.4.3 RRM core requirements (38.133) [NR\_IAB-Core] 144

7.4.3.1 RLM requirements [NR\_IAB-Core] 144

7.4.3.2 Other requirements maintenance [NR\_IAB-Core] 145

7.4.4 EMC core requirements [NR\_IAB-Core] 145

7.4.4.1 General [NR\_IAB-Core] 146

7.4.4.2 Emission requirements [NR\_IAB-Core] 146

7.4.4.3 Immunity requirements [NR\_IAB-Core] 147

7.4.5 Demodulation and CSI requirements [NR\_IAB-Perf] 147

7.4.5.1 General [NR\_IAB-Perf] 147

7.4.5.2 IAB-DU performance requirements [NR\_IAB-Perf] 148

7.4.5.3 IAB-MT performance requirements [NR\_IAB-Perf] 149

7.5 Multi-RAT Dual-Connectivity and Carrier Aggregation enhancements [LTE\_NR\_DC\_CA\_enh] 149

7.5.1 General [LTE\_NR\_DC\_CA\_enh-Core] 149

7.5.2 RF requirements maintenance [LTE\_NR\_DC\_CA\_enh-Core] 149

7.5.3 RRM core requirements (38.133) [LTE\_NR\_DC\_CA\_enh-Core] 150

7.5.3.1 Early Measurement reporting [LTE\_NR\_DC\_CA\_enh-Core] 150

7.5.3.1.1 NR measurements for EMR [LTE\_NR\_DC\_CA\_enh-Core] 150

7.5.3.1.2 LTE NR Inter-RAT EMR [LTE\_NR\_DC\_CA\_enh-Core] 151

7.5.3.2 Efficient and low latency serving cell configuration, activation and setup [LTE\_NR\_DC\_CA\_enh-Core] 152

7.5.3.2.1 Direct SCell activation [LTE\_NR\_DC\_CA\_enh-Core] 152

7.5.3.2.2 SCell dormancy [LTE\_NR\_DC\_CA\_enh-Core] 153

7.5.3.3 Other requirements [LTE\_NR\_DC\_CA\_enh-Core] 156

7.6 UE power saving in NR [NR\_UE\_pow\_sav] 156

7.6.1 General [NR\_UE\_pow\_sav] 156

7.6.2 RRM core requirements maintenance (38.133) [NR\_UE\_pow\_sav-Core] 156

7.6.3 RRM perf. requirements (38.133) [NR\_UE\_pow\_sav-Perf] 158

7.6.3.1 General [NR\_UE\_pow\_sav-Perf] 158

7.6.3.2 Test cases [NR\_UE\_pow\_sav-Perf] 158

7.6.4 Demodulation and CSI requirements (38.101-4) [NR\_UE\_pow\_sav-Perf] 159

7.7 NR Positioning Support [NR\_pos] 160

7.7.1 General [NR\_pos-Core/Perf] 160

7.7.2 RRM core requirements (38.133) [NR\_pos-Core] 160

7.7.2.1 UE requirements [NR\_pos-Core] 160

7.7.2.1.1 PRS-RSTD measurement requirements [NR\_pos-Core] 160

7.7.2.1.2 PRS-RSRP measurement requirements [NR\_pos-Core] 162

7.7.2.1.3 UE Rx-Tx time difference measurement requirements [NR\_pos-Core] 163

7.7.2.1.4 Link simulation results for UE measurements [NR\_pos-Core] 165

7.7.2.2 New measurement gap patterns for positioning measurements [NR\_pos-Core] 166

7.7.2.3 gNB requirements [NR\_pos-Core] 168

7.7.2.4 Other requirements [NR\_pos-Core] 170

7.8 Physical layer enhancements for NR URLLC [NR\_L1enh\_URLLC-Core] 171

7.8.1 Demodulation and CSI requirements (38.101-4/38.104) [NR\_L1enh\_URLLC-Perf] 171

7.8.1.1 Performance requirements with ultra-low BLER [NR\_L1enh\_URLLC-Perf] 171

7.8.1.1.1 UE demodulation requirements [NR\_L1enh\_URLLC-Perf] 171

7.8.1.1.2 CSI requirements [NR\_L1enh\_URLLC-Perf] 173

7.8.1.1.3 BS demodulation requirements [NR\_L1enh\_URLLC-Perf] 173

7.8.1.2 Performance requirements with higher BLER [NR\_L1enh\_URLLC-Perf] 175

7.8.1.2.1 UE demodulation requirements [NR\_L1enh\_URLLC-Perf] 175

7.8.1.2.2 CSI requirements [NR\_L1enh\_URLLC-Perf] 177

7.8.1.2.3 BS demodulation requirements [NR\_L1enh\_URLLC-Perf] 178

7.9 Enhancements on MIMO for NR [NR\_eMIMO] 180

7.9.1 UE RF core requirements (38.101) [NR\_eMIMO-Core] 180

7.9.1.1 DMRS enhancement with PI/2 BPSK [NR\_eMIMO-Core] 180

7.9.1.2 Uplink Tx Full Power transmission [NR\_eMIMO-Core] 180

7.9.2 RRM core requirements (38.133) [NR\_eMIMO-Core] 181

7.9.2.1 DL/UL beam indication with reduced latency and overhead [NR\_eMIMO-Core] 181

7.9.2.2 Multi-TRP transmission related requirements [NR\_eMIMO-Core] 182

7.9.2.3 Other requirements maintenance [NR\_eMIMO-Core] 184

7.9.3 Demodulation and CSI requirements (38.101-4) [NR\_eMIMO-Perf] 185

7.9.3.1 General [NR\_eMIMO-Perf] 185

7.9.3.2 Demodulation requirements [NR\_eMIMO-Perf] 185

7.9.3.3 CSI requirements [NR\_eMIMO-Perf] 187

7.10 Add support of NR DL 256QAM for FR2 [NR\_DL256QAM\_FR2] 188

7.10.1 BS RF core requirements maintenance (38.104) [NR\_DL256QAM\_FR2] 188

7.10.2 UE RF core requirements maintenance (38.101-2) [NR\_DL256QAM\_FR2] 188

7.10.3 Demodulation and CSI requirements (38.101-4) [NR\_DL256QAM\_FR2-Perf] 188

7.10.3.1 UE Demodulation requirements [NR\_DL256QAM\_FR2-Perf] 188

7.10.3.2 SDR requirements [NR\_DL256QAM\_FR2-Perf] 189

7.10.3.3 CSI requirements [NR\_DL256QAM\_FR2-Perf] 189

7.11 RF requirements for NR frequency range 1 (FR1) [NR\_RF\_FR1] 190

7.11.1 RF core requirements [NR\_RF\_FR1-Core ] 190

7.11.1.1 Intra-band contiguous DL CA for FR1 [NR\_RF\_FR1-Core] 190

7.11.1.2 General for Intra-band UL CA [NR\_RF\_FR1-Core] 190

7.11.1.2.1 DC location for Intra-band UL CA [NR\_RF\_FR1-Core] 190

7.11.1.2.2 UE capability for Intra-band UL CA [NR\_RF\_FR1-Core] 190

7.11.1.3 Intra-band contiguous UL CA for FR1 power class 3 [NR\_RF\_FR1-Core] 191

7.11.1.4 Intra-band non-contiguous UL CA for FR1 power class 3 [NR\_RF\_FR1-Core] 192

7.11.1.4.1 MPR/A-MPR [NR\_RF\_FR1-Core] 192

7.11.1.4.2 Other TX requirements [NR\_RF\_FR1-Core] 193

7.11.1.5 Switching period between case 1 and case 2 [NR\_RF\_FR1-Core] 193

7.11.1.6 Time masks for ULSUP-TDM in case of UL timing misalignment [NR\_RF\_FR1-Core] 194

7.11.2 RRM core requirements maintenance (38.133) [NR\_RF\_FR1-Core] 194

7.11.3 RRM perf. requirements (38.133) [NR\_RF\_FR1-Perf] 194

7.11.3.1 General [NR\_RF\_FR1-Perf] 194

7.11.3.2 Test cases [NR\_RF\_FR1-Perf] 194

7.12 NR RF requirement enhancements for frequency range 2 (FR2) [NR\_RF\_FR2\_req\_enh] 195

7.12.1 RF core requirements [NR\_RF\_FR2\_req\_enh-Core] 195

7.12.1.1 FR2 MPE [NR\_RF\_FR2\_req\_enh-Core] 195

7.12.1.2 Beam Correspondence based on configured DL RS (SSB or CSI-RS) [NR\_RF\_FR2\_req\_enh-Core] 197

7.12.1.3 Intra-band non-contiguous DL CA for aggregated BW larger than 1400 MHz [NR\_RF\_FR2\_req\_enh-Core] 199

7.12.1.4 Intra-band non-contiguous UL CA [NR\_RF\_FR2\_req\_enh-Core] 199

7.12.1.5 Inter-band DL CA [NR\_RF\_FR2\_req\_enh-Core] 200

7.12.1.6 Improvement of UE MPR [NR\_RF\_FR2\_req\_enh-Core] 201

7.12.1.7 Multiband relaxation framework enhancement [NR\_RF\_FR2\_req\_enh-Core] 202

7.12.1.8 FR2 Beam Squint [NR\_RF\_FR2\_req\_enh-Core] 202

7.12.2 RRM core requirements (38.133) [NR\_RF\_FR2\_req\_enh-Core] 202

7.12.2.1 Inter-band DL CA MRTD [NR\_RF\_FR2\_req\_enh-Core] 202

7.13 NR RRM requirement enhancement [NR\_RRM\_Enh\_Core] 205

7.13.1 RRM core requirements (38.133) [NR\_RRM\_Enh\_Core] 205

7.13.1.1 SRS carrier switching requirements [NR\_RRM\_Enh\_Core] 205

7.13.1.2 CGI reading requirements with autonomous gap [NR\_RRM\_Enh\_Core] 205

7.13.1.3 BWP switching on multiple CCs [NR\_RRM\_Enh\_Core] 208

7.13.1.4 Spatial relation switch for uplink [NR\_RRM\_Enh\_Core] 211

7.13.1.5 Inter-band CA requirement for FR2 UE measurement capability of independent Rx beam and/or common beam [NR\_RRM\_Enh\_Core] 212

7.13.1.6 Other requirements maintenance [NR\_RRM\_Enh\_Core] 214

7.14 NR RRM requirements for CSI-RS based L3 measurement [NR\_CSIRS\_L3meas] 216

7.14.1 RRM core requirements (38.133) [NR\_CSIRS\_L3meas-Core] 216

7.14.1.1 CSI-RS measurement bandwidth [NR\_CSIRS\_L3meas-Core] 216

7.14.1.2 CSI-RS based intra-frequency and inter-frequency measurements definition [NR\_CSIRS\_L3meas-Core] 218

7.14.1.3 Measurement capability [NR\_CSIRS\_L3meas-Core] 219

7.14.1.4 Intra-frequency and inter-frequency measurement requirements [NR\_CSIRS\_L3meas-Core] 220

7.14.1.5 Other requirements [NR\_CSIRS\_L3meas-Core] 223

7.15 NR support for high speed train scenario [NR\_HST] 225

7.15.1 RRM core requirements maintenance (38.133) [NR\_HST-Core] 225

7.15.2 RRM perf. requirements (38.133) [NR\_HST-Perf] 227

7.15.2.1 General [NR\_HST-Perf] 227

7.15.2.2 Test cases [NR\_HST-Perf] 228

7.15.3 Demodulation and CSI requirements (38.101-4 / 38.104) [NR\_HST-Perf] 228

7.15.3.1 UE demodulation and CSI requirements [NR\_HST-Perf] 228

7.15.3.1.1 Scenarios and transmission schemes [NR\_HST-Perf] 229

7.15.3.1.2 Requirements for HST-SFN [NR\_HST-Perf] 230

7.15.3.1.3 Requirements for HST single tap [NR\_HST-Perf] 231

7.15.3.1.4 Requirements for multi-path fading channels [NR\_HST-Perf] 232

7.15.3.1.5 Network assistance and UE capability signalling [NR\_HST-Perf] 232

7.15.3.2 BS demodulation requirements [NR\_HST-Perf] 233

7.15.3.2.1 PUSCH requirements [NR\_HST-Perf] 233

7.15.3.2.2 PRACH requirements [NR\_HST-Perf] 236

7.15.3.2.3 UL timing adjustment requirements [NR\_HST-Perf] 238

7.16 NR performance requirement enhancement [NR\_perf\_enh-Perf] 240

7.16.1 UE demodulation and CSI requirements (38.101-4) [NR\_perf\_enh-Perf] 240

7.16.1.1 NR CA PDSCH requirements [NR\_perf\_enh-Perf] 240

7.16.1.2 PMI reporting requirements with larger number of Tx ports [NR\_perf\_enh-Perf] 242

7.16.1.3 LTE-NR co-existence for TDD [NR\_perf\_enh-Perf] 244

7.16.1.4 FR1 CA and EN-DC power imbalance requirements [NR\_perf\_enh-Perf] 244

7.16.1.5 NR CA CQI reporting requirements [NR\_perf\_enh-Perf] 245

7.16.2 BS demodulation requirements (38.104) [NR\_perf\_enh-Perf] 246

7.16.2.1 30% TP test point [NR\_perf\_enh-Perf] 246

7.16.2.2 Additional FR2 requirements [NR\_perf\_enh-Perf] 246

7.17 Over the air (OTA) base station (BS) testing TR [OTA\_BS\_testing-Perf] 246

7.17.1 General [OTA\_BS\_testing-Perf] 246

7.17.2 OTA calibration and test method procedures [OTA\_BS\_testing-Perf] 247

7.17.3 OTA BS measurements classification [OTA\_BS\_testing-Perf] 247

7.17.4 MU / TT values: derivation and tables [OTA\_BS\_testing-Perf] 247

7.17.5 Annexes [OTA\_BS\_testing-Perf] 248

7.17.6 Others [OTA\_BS\_testing-Perf] 248

7.18 2-step RACH for NR [NR\_2step\_RACH-Perf] 249

7.18.1 RRM core requirements maintenance (38.133) [NR\_2step\_RACH-Core] 249

7.18.2 RRM perf. requirements (38.133) [NR\_2step\_RACH-Perf] 250

7.18.2.1 General [NR\_2step\_RACH-Perf] 250

7.18.2.2 Test cases [NR\_2step\_RACH-Perf] 250

7.18.3 BS Demodulation requirements (38.104) [NR\_2step\_RACH-Perf] 251

7.18.4 Others [NR\_2step\_RACH-Perf] 252

7.19 R16 NR maintenance [WI code or TEI16] 252

7.19.1 UE transient period capability [TEI16] 252

7.19.2 Transmit diversity and power class related to UL MIMO [TEI16] 253

7.19.2.1 R16 support of transmit diversity [TEI16] 253

7.19.3 Other UE RF [WI code or TEI16] 256

7.19.4 BS RF [WI code or TEI16] 263

7.19.5 RRM [WI code or TEI16] 264

7.19.6 Demodulation and CSI [WI code or TEI16] 266

8 Rel-16 UE feature list 266

9 Rel-16 spectrum related Work Items for NR 267

9.1 29dBm UE Power Class for B41 and n41 [LTE\_NR\_B41\_Bn41\_PC29dBm] 267

9.1.1 General [LTE\_NR\_B41\_Bn41\_PC29dBm] 267

9.1.2 UE RF (36.101, 38.101-1, 38.101-3) [LTE\_NR\_B41\_Bn41\_PC29dBm] 267

9.1.3 Others [LTE\_NR\_B41\_Bn41\_PC29dBm] 268

9.2 Power Class 2 UE for EN-DC (1 LTE FDD band +1 NR TDD band) [ENDC\_UE\_PC2\_FDD\_TDD-Core] 268

9.2.1 General [ENDC\_UE\_PC2\_FDD\_TDD-Core] 268

9.2.2 UE RF requirement [ENDC\_UE\_PC2\_FDD\_TDD-Core] 269

9.2.3 Signaling [ENDC\_UE\_PC2\_FDD\_TDD-Core] 270

9.3 LTE/NR spectrum sharing in band 48/n48 frequency range [NR\_n48\_LTE\_48\_coex-Core] 270

9.3.1 General [NR\_n48\_LTE\_48\_coex-Core] 270

9.3.2 Channel raster, sync raster, and UL shift [NR\_n48\_LTE\_48\_coex-Core] 270

10 Rel-17 spectrum related Work Items for NR 271

10.1 NR intra band Carrier Aggregation for xCC DL/yCC UL including contiguous and non-contiguous spectrum (x>=y) [NR\_CA\_R17\_intra] 272

10.1.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R17\_intra-Core /Perf] 272

10.1.2 UE RF for FR1 [NR\_CA\_R17\_intra-Core] 273

10.1.3 UE RF for FR2 [NR\_CA\_R17\_intra-Core] 273

10.2 NR inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1, 2) [NR\_CADC\_R17\_2BDL\_xBUL] 274

10.2.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_2BDL\_xBUL-Core/Perf] 274

10.2.2 NR inter band CA without any FR2 band(s) [NR\_CADC\_R17\_2BDL\_xBUL-Core] 274

10.2.3 NR inter band CA with at least one FR2 band [NR\_CADC\_R17\_2BDL\_xBUL-Core] 279

10.3 DC of 1 LTE band and 1 NR band [DC\_R17\_1BLTE\_1BNR\_2DL2UL] 282

10.3.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core/Perf] 282

10.3.2 EN-DC without FR2 band [DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core] 283

10.3.3 EN-DC with FR2 band [DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core] 287

10.4 DC of 2 LTE band and 1 NR band [DC\_R17\_2BLTE\_1BNR\_3DL2UL] 289

10.4.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core/Perf] 289

10.4.2 EN-DC without FR2 band [DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core] 290

10.4.3 EN-DC with FR2 band [DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core] 299

10.5 DC of 3 LTE band and 1 NR band [DC\_R17\_3BLTE\_1BNR\_4DL2UL] 299

10.5.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_3BLTE\_1BNR\_4DL2UL-Core/Perf] 301

10.5.2 EN-DC without FR2 band [DC\_R17\_3BLTE\_1BNR\_4DL2UL-Core] 301

10.5.3 EN-DC with FR2 band [DC\_R17\_3BLTE\_1BNR\_4DL2UL-Core] 304

10.6 DC of 4 LTE band and 1 NR band [DC\_R17\_4BLTE\_1BNR\_5DL2UL] 304

10.6.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_4BLTE\_1BNR\_5DL2UL-Core/Perf] 305

10.6.2 EN-DC without FR2 band [DC\_R17\_4BLTE\_1BNR\_5DL2UL-Core] 306

10.6.3 EN-DC with FR2 band [DC\_R17\_4BLTE\_1BNR\_5DL2UL-Core] 306

10.7 DC of x bands (x=1,2, 3, 4) LTE inter-band CA and 2 bands NR inter-band CA [DC\_R17\_xBLTE\_2BNR\_yDL2UL] 307

10.7.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core/Per] 10.7.2 EN-DC including NR inter CA without FR2 band [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core] 307

10.7.2 EN-DC including NR inter CA without FR2 band [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core] 307

10.7.3 EN-DC including NR inter CA with FR2 band [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core] 312

10.8 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\_R17] 312

10.8.1 Rapporteur Input (WID/TR/CR) [NR\_SUL\_combos\_R17-Core/Per] 312

10.8.2 UE RF [NR\_SUL\_combos\_R17-Core] 313

10.9 NR Inter-band Carrier Aggregation for 3 bands DL with 1 band UL [NR\_CA\_R17\_3BDL\_1BUL] 315

10.9.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R17\_3BDL\_1BUL-Core/Per] 315

10.9.2 UE RF [NR\_CA\_R17\_3BDL\_1BUL-Core] 315

10.10 NR Inter-band Carrier Aggregation for 4 bands DL with 1 band UL [NR\_CA\_R17\_4BDL\_1BUL] 317

10.10.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R17\_4BDL\_1BUL-Core/Per] 317

10.10.2 UE RF [NR\_CA\_R17\_4BDL\_1BUL-Core] 318

10.11 NR Inter-band Carrier Aggregation/Dual connectivity for 3 bands DL with 2 bands UL [NR\_CADC\_R17\_3BDL\_2BUL] 319

10.11.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_3BDL\_2BUL-Core/Per] 319

10.11.2 UE RF [NR\_CADC\_R17\_3BDL\_2BUL-Core] 320

10.12 DC of x bands (x=1,2) LTE inter-band CA (xDL/xUL) and y bands (y=3-x) NR inter-band CA [DC\_R17\_xBLTE\_yBNR\_3DL3UL] 322

10.12.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_xBLTE\_yBNR\_3DL3UL-Core/Per] 322

10.12.2 UE RF [DC\_R17\_xBLTE\_yBNR\_3DL3UL-Core] 322

10.13 DC of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and 3 bands NR inter-band CA (3DL/1UL) [DC\_R17\_xBLTE\_3BNR\_yDL2UL] 323

10.13.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_xBLTE\_3BNR\_yDL2UL -Core/Per] 323

10.13.2 UE RF [DC\_R17\_xBLTE\_3BNR\_yDL2UL-Core] 323

10.14 NR inter-band Carrier Aggregation and Dual connectivity for DL 4 bands and 2UL bands [NR\_CADC\_R17\_4BDL\_2BUL] 323

10.14.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_4BDL\_2BUL -Core/Per] 323

10.14.2 UE RF [NR\_CADC\_R17\_4BDL\_2BUL -Core] 324

10.15 NR inter-band CA for 5 bands DL with x bands UL (x=1, 2) [NR\_CADC\_R17\_5BDL\_xBUL\_3DL3UL] 324

10.15.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_5BDL\_xBUL -Core/Per] 324

10.15.2 UE RF [NR\_CADC\_R17\_5BDL\_xBUL -Core] 325

10.16 Power Class 2 UE for NR inter-band CA and SUL configurations with 2 bands UL [NR\_SAR\_PC2\_interB\_SUL\_2BUL] 325

10.16.1 Rapporteur Input (WID/TR/CR) [NR\_SAR\_PC2\_interB\_SUL\_2BUL-Core/Per] 325

10.16.2 PC2 for inter-band CA [NR\_SAR\_PC2\_interB\_SUL\_2BUL-Core] 326

10.16.3 PC2 for SUL [NR\_SAR\_PC2\_interB\_SUL\_2BUL-Core] 326

10.17 Adding channel bandwidth support to existing NR bands [NR\_BW\_Bands] 327

10.17.1 General and Rapporteur Input (WID/TR/CR) [NR\_BW\_Bands -Core/Per] 327

10.17.2 UE RF requirement [NR\_BW\_Bands -Core] 327

10.17.2.1 Reference sensitivity [NR\_BW\_Bands -Core] 328

10.17.2.2 MPR/A-MPR/NS signaling [NR\_BW\_Bands -Core] 328

10.17.2.3 others [NR\_BW\_Bands -Core] 328

10.17.3 BS RF requirement [NR\_BW\_Bands -Core] 329

10.18 Introduction of channel bandwidths 35MHz and 45MHz for NR [NR\_FR1\_35MHz\_45MHz\_BW] 330

10.18.1 General and Rapporteur Input (WID/TR/CR) [NR\_FR1\_35MHz\_45MHz\_BW-Core/Per] 330

10.18.2 Spectrum utilization [NR\_FR1\_35MHz\_45MHz\_BW-Core] 330

10.18.3 UE RF requirements [NR\_FR1\_35MHz\_45MHz\_BW-Core] 331

10.18.4 BS RF requirements [NR\_FR1\_35MHz\_45MHz\_BW-Core] 331

10.18.5 Others [NR\_FR1\_35MHz\_45MHz\_BW-Core] 332

10.19 Band combinations for Uu and V2X con-current operation [NR\_LTE\_V2X\_PC5\_combos] 332

10.19.1 General and Rapporteur Input (WID/TR/CR) [NR\_LTE\_V2X\_PC5\_combos-Core/Per] 332

10.19.2 UE RF requirement for concurrent operation between NR Uu band and NR PC5 band [NR\_LTE\_V2X\_PC5\_combos-Core] 332

10.19.3 UE RF requirement for concurrent operation between LTE Uu band and NR PC5 band [NR\_LTE\_V2X\_PC5\_combos-Core] 333

10.19.4 UE RF requirement for concurrent operation between NR Uu band and LTE PC5 band [NR\_LTE\_V2X\_PC5\_combos-Core] 333

10.19.5 UE RF requirement for concurrent operation of LTE/NR CA/DC band combinations + PC5 V2X [NR\_LTE\_V2X\_PC5\_combos-Core] 333

10.20 Introduction of FR2 FWA UE with maximum TRP of 23dBm for band n257 and n258 [NR\_FR2\_FWA\_Bn257\_Bn258] 333

10.20.1 UE RF (38.101-2) [NR\_FR2\_FWA\_Bn257\_Bn258-Core] 333

10.20.2 RRM Core requirements (38.133) [NR\_FR2\_FWA\_Bn257\_Bn258-Core] 334

10.20.3 RRM Perf. requirements (38.133) [NR\_FR2\_FWA\_Bn257\_Bn258-Perf] 335

10.20.4 Others [NR\_FR2\_FWA\_Bn257\_Bn258-Core/Perf] 335

10.21 Introduction of NR band n13 [NR\_n13] 335

10.21.1 UE RF (38.101-1) [NR\_n13-Core] 335

10.21.2 BS RF (38.104) [NR\_n13-Core] 336

10.21.3 RRM (38.133) [NR\_n13-Core] 336

10.21.4 Others [NR\_n13-Core/Perf] 336

10.22 Introduction of 1880-1920MHz SUL band for NR [NR\_SUL\_band\_1880\_1920MHz] 336

10.22.1 UE RF (38.101-1) [NR\_SUL\_band\_1880\_1920MHz-Core] 336

10.22.2 BS RF (38.104) [NR\_SUL\_band\_1880\_1920MHz -Core] 336

10.22.3 RRM (38.133) [NR\_SUL\_band\_1880\_1920MHz -Core] 340

10.22.4 Others [NR\_SUL\_band\_1880\_1920MHz -Core/Perf] 340

10.23 Introduction of 2300-2400MHz SUL band for NR [NR\_SUL\_band\_2300\_2400MHz] 340

10.23.1 UE RF (38.101-1) [NR\_SUL\_band\_2300\_2400MHz -Core] 340

10.23.2 BS RF (38.104) [NR\_SUL\_band\_2300\_2400MHz -Core] 340

10.23.3 RRM (38.133) [NR\_SUL\_band\_2300\_2400MHz -Core] 344

10.23.4 Others [NR\_SUL\_band\_2300\_2400MHz -Core/Perf] 344

10.24 Introduction of NR 47 GHz band [NR\_47GHz\_Band] 344

10.24.1 UE RF (38.101-2) [NR\_47GHz\_Band -Core] 344

10.24.2 BS RF (38.104) [NR\_47GHz\_Band -Core] 345

10.24.3 RRM (38.133) [NR\_47GHz\_Band -Core] 345

10.24.4 Others [NR\_47GHz\_Band -Core/Perf] 345

10.25 Introduction of NR band n24 [NR\_band\_n24] 346

10.25.1 UE RF (38.101-1) [NR\_band\_n24-Core] 346

10.25.2 BS RF (38.104) [NR\_band\_n24-Core] 346

10.25.3 RRM (38.133) [NR\_band\_n24-Core] 346

10.25.4 Others [NR\_band\_n24-Core/Perf] 346

10.26 Introduction of 1.6 GHz NR SUL band with same uplink frequency range of Band 24 [NR\_SUL\_UL\_n24] 347

10.26.1 UE RF (38.101-1) [NR\_SUL\_UL\_n24-Core] 347

10.26.2 BS RF (38.104) [NR\_SUL\_UL\_n24-Core] 347

10.26.3 RRM (38.133) [NR\_SUL\_UL\_n24-Core] 347

10.26.4 Others [NR\_SUL\_UL\_n24-Core/Perf] 347

10.27 LTE/NR spectrum sharing in Band 40/n40 [NR\_n40\_LTE\_40\_coex-Core] 347

10.27.1 General [NR\_n40\_LTE\_40\_coex-Core] 347

10.27.2 UL shift [NR\_n40\_LTE\_40\_coex-Core] 348

10.28 LTE/NR spectrum sharing in Band 38/n38 [NR\_n38\_LTE\_38\_coex-Core] 348

10.28.1 General [NR\_n38\_LTE\_38\_coex-Core] 349

10.28.2 UL shift [NR\_n38\_LTE\_38\_coex-Core] 349

11 Reply to ITU-R LS (RP-200042) 349

11.1 Study on IMT parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz [FS\_6425\_10500MHz \_NR] 349

11.1.1 UE parameters 349

11.1.2 BS parameters 350

11.1.3 Coexistence study 351

11.1.3.1 Simulation assumptions 351

11.1.3.2 Downlink 351

11.1.3.3 Uplink 352

11.1.4 Antenna characteristics 353

11.1.5 Relevant information for the sharing and compatibility studies 354

11.2 Reply of IMT parameters for other frequency ranges requested in RP-200042 354

12 Rel-17 non-spectrum related work items for NR 354

12.1 Multiple Input Multiple Output (MIMO) Over-the-Air (OTA) requirements for NR UEs [NR\_MIMO\_OTA] 354

12.1.1 General [NR\_MIMO\_OTA] 354

12.1.2 Performance Requirements [NR\_MIMO\_OTA-Core] 355

12.1.2.1 Performance Requirements for FR1 [NR\_MIMO\_OTA-Core] 355

12.1.2.2 Performance Requirements for FR2 [NR\_MIMO\_OTA-Core] 355

12.1.3 Testing methodologies [NR\_MIMO\_OTA-Core] 356

12.1.3.1 Testing parameters for Performance [NR\_MIMO\_OTA-Core] 356

12.1.3.2 Optimization of test methodologies [NR\_MIMO\_OTA-Core] 356

12.1.3.3 Channel model validation [NR\_MIMO\_OTA-Core] 356

13 Rel-17 Study Items for NR 357

13.1 Study on enhanced test methods for FR2 in NR [FS\_FR2\_enhTestMethods] 357

13.1.1 Test methodology for high DL power and low UL power test cases 357

13.1.2 Polarization basis mismatch 358

13.1.3 Enhanced test methods for inter-band (FR1+FR2) CA 360

13.2 Study on supporting NR from 52.6 GHz to 71 GHz [FS\_NR\_52\_to\_71GHz] 360

13.2.1 General [FS\_NR\_52\_to\_71GHz] 360

13.2.2 Numerology, Channel BW [FS\_NR\_52\_to\_71GHz] 361

13.2.3 Others [FS\_NR\_52\_to\_71GHz] 363

14 Rel-17 Work Items for LTE 364

14.1 LTE inter-band Carrier Aggregation for 2 bands DL with 1 band UL [LTE\_CA\_R17\_2BDL\_1BUL] 364

14.1.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_2BDL\_1BUL-Core/Perf] 364

14.1.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R17\_2BDL\_1BUL-Core] 364

14.1.3 UE RF without specific issues [LTE\_CA\_R17\_2BDL\_1BUL-Core] 364

14.2 LTE inter-band Carrier Aggregation for 3 bands DL with 1 band UL [LTE\_CA\_R17\_3BDL\_1BUL] 365

14.2.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_3BDL\_1BUL-Core/Perf] 366

14.2.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R17\_3BDL\_1BUL-Core] 366

14.2.3 UE RF without specific issues [LTE\_CA\_R17\_3BDL\_1BUL-Core] 366

14.3 LTE inter-band Carrier Aggregation for x bands DL (x=4, 5) with 1 band UL [LTE\_CA\_R17\_xBDL\_1BUL] 368

14.3.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_xBDL\_1BUL-Core] 368

14.3.2 UE RF with 4 LTE bands CA [LTE\_CA\_R17\_xBDL\_1BUL-Core] 368

14.3.3 UE RF with 5 LTE bands CA [LTE\_CA\_R17\_xBDL\_1BUL-Core] 369

14.4 LTE inter-band Carrier Aggregation for 2 bands DL with 2 band UL [LTE\_CA\_R17\_2BDL\_2BUL] 369

14.4.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_2BDL\_2BUL-Core] 369

14.4.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R17\_2BDL\_2BUL-Core] 369

14.4.3 UE RF without specific issues [LTE\_CA\_R17\_2BDL\_2BUL-Core] 369

14.5 LTE inter-band Carrier Aggregation for x bands DL (x= 3, 4, 5) with 2 band UL [LTE\_CA\_R17\_xBDL\_2BUL] 369

14.5.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_xBDL\_2BUL-Core] 369

14.5.2 UE RF with MSD [LTE\_CA\_R17\_xBDL\_2BUL-Core] 370

14.5.3 UE RF without MSD [LTE\_CA\_R17\_xBDL\_2BUL-Core] 370

14.6 RRM for LTE CA basket WIs [LTE\_CA\_R17\_xxxx] 371

14.6.1 RRM Core (36.133) [LTE\_CA\_R17\_xxxx-Core] 371

14.6.2 RRM Perf (36.133) [LTE\_CA\_R17\_xxxx-Perf] 371

14.7 New WID on Additional LTE bands for UE category M1&M2 and/or NB1&NB2 in Rel-17 [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2] 371

14.7.1 Rapporteur Input (WID/TR/CR) [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2-Core] 371

14.7.2 RF [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2-Core] 371

14.7.3 Others [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2-Perf] 371

14.8 Modification of LTE Band 24 specifications to comply with updated regulatory emission limits [LTE\_B24\_mod] 371

14.8.1 General and rapporteur input [LTE\_B24\_mod-Core] 371

14.8.2 UE RF [LTE\_B24\_mod-Core] 371

14.8.3 BS RF [LTE\_B24\_mod-Core] 372

14.8.4 RRM and others [LTE\_B24\_mod-Core/Perf] 372

15 Rel-17 Study Items for LTE 372

15.1 High-power UE operation for fixed-wireless/vehicle-mounted use cases in LTE bands 5 and 12 and NR band n71 [FS\_LTE\_NR\_HPUE\_FWVM] 372

15.1.1 General 372

15.1.2 Coexistence study 373

15.1.3 UE RF 373

16 Liaison and output to other groups 373

17 Revision of the Work Plan 374

17.1 Simplification of band combinations in RAN4 specifications 374

17.2 R17 new proposals 375

17.2.1 Spectrum related 375

17.2.2 Non-spectrum related 376

17.3 Others 381

18 Any other business 381

19 Close of the E-meeting 382

## 1 Opening of the E-meeting

**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.

**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

**R4-2009500 Agenda for RAN4 #96-e**

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

**Discussion:**

**Discussion:**

**Decision:** The document was **revised to R4-2011530**.

**R4-2011530 Agenda for RAN4 #96-e**

*Type: agenda For: Approval  
 Source: ETSI*

(Replaces R4-2009500)

**Discussion:**

**Decision: Revised to R4-2011578 (from R4-2011530).**

**R4-2011578 Agenda for RAN4 #96-e**

*Type: agenda For: Approval  
 Source: ETSI*

**Discussion:**

**Decision: Approved.**

**R4-2009501 RAN4#95-e Meeting Report**

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

**Discussion:**

**Decision: Approved.**

**R4-2011531 E-meeting arrangements and guidelines**

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

**Discussion:**

.

**Decision: Revised to R4-2011533 (from R4-2011531).**

**R4-2011533 E-meeting arrangements and guidelines**

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

**Discussion:**

.

**Decision: Approved.**

## 3 Letters / reports from other groups / meetings

**R4-2009502 NGMN Liaison Statement to 3GPP RAN4 on 5G NR Over The Air test methodologies and performance requirements**

*Type: LS in For: Information  
 Original outgoing LS: -, to RAN4, cc RAN5, RAN  
 Source: NGMN Alliance Project “Devices and Chipsets for 5G”*

**Discussion:**

**Decision: Noted.**

**R4-2009503 Resolutions of the World Radiocommunication Conference, 2019 (WRC-19) 01PC(FMD)O-2020-001473**

*Type: LS in For: Information  
 Original outgoing LS: -, to RAN4, cc -  
 Source: WRC-19*

**Discussion:**

**Decision: Noted.**

**R4-2009504 LS response to RAN2 LS on Guard Symbols in IAB**

*Type: LS in For: Information  
 Original outgoing LS: R1-2004784, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009505 LS on categories for terrestrial broadcast**

*Type: LS in For: Information  
 Original outgoing LS: R1-2004912, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009506 LS to RAN2 on NR-U RSSI Measurement Duration**

*Type: LS in For: Information  
 Original outgoing LS: R1-2004915, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009507 Reply LS on RAN4 IAB-MT feature list agreement**

*Type: LS in For: Information  
 Original outgoing LS: R1-2004954, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009508 LS on the UE DL PRS processing**

*Type: LS in For: Information  
 Original outgoing LS: R1-2004959, to RAN4, cc RAN2  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009509 LS on UE capability on wideband carrier operation for NR-U**

*Type: LS in For: Information  
 Original outgoing LS: R1-2004965, to RAN4, cc RAN2  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009510 Reply LS on NR-U SSB monitoring capabilities**

*Type: LS in For: Information  
 Original outgoing LS: R1-2004992, to RAN4, cc -  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009511 LS Reply on DCP Open Issues**

*Type: LS in For: Information  
 Original outgoing LS: R1-2004994, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009512 LS to RAN2 on initial BWP for NR-U**

*Type: LS in For: Information  
 Original outgoing LS: R1-2004998, to RAN4, cc RAN2  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009513 LS on SCell Dormancy**

*Type: LS in For: Information  
 Original outgoing LS: R1-2005081, to RAN4, cc -  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009514 LS on updated Rel-16 RAN1 UE features lists for NR**

*Type: LS in For: Information  
 Original outgoing LS: R1-2005096, to RAN4, RAN2, cc -  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009515 LS on sidelink synchronization timing reference**

*Type: LS in For: Information  
 Original outgoing LS: R1-2005098, to RAN4, cc -  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009516 LS on updated Rel-16 RAN1 UE features lists for NR after RAN1#101-e**

*Type: LS in For: Information  
 Original outgoing LS: R1-2005109, to RAN4, RAN2, cc -  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009517 LS on further updated Rel-16 RAN1 UE features list for LTE**

*Type: LS in For: Information  
 Original outgoing LS: R1-2005118, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

**Decision: Noted.**

**R4-2009518 LS reply to RAN4 on UE declaring beam failure due to LBT failures during active TCI switching**

*Type: LS in For: Information  
 Original outgoing LS: R2-2005851, to RAN4, cc RAN1  
 Source: RAN2*

**Discussion:**

**Decision: Noted.**

**R4-2009519 LS to RAN4 on RRM relaxation in power saving**

*Type: LS in For: Information  
 Original outgoing LS: R2-2005858, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

**Decision: Noted.**

**R4-2009520 Reply LS on Rel-16 UE feature lists**

*Type: LS in For: Information  
 Original outgoing LS: R2-2006030, to RAN4, RAN1, cc -  
 Source: RAN2*

**Discussion:**

**Decision: Noted.**

**R4-2009521 Reply LS on supporting Rel-16 NR HST from Rel-15 Ues**

*Type: LS in For: Information  
 Original outgoing LS: R2-2006192, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

**Decision: Noted.**

**R4-2009522 Reply LS on inter-frequency measurement without gap**

*Type: LS in For: Information  
 Original outgoing LS: R2-2006264, to RAN4, cc RAN1  
 Source: RAN2*

**Discussion:**

**Decision: Noted.**

**R4-2009523 Reply LS RAN4 on RRM Enhanced Measurement Reporting**

*Type: LS in For: Information  
 Original outgoing LS: R2-2006287, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

**Decision: Noted.**

**R4-2009524 Reply LS on SCell dormancy requirement scope**

*Type: LS in For: Information  
 Original outgoing LS: R2-2006318, to RAN4, cc RAN1  
 Source: RAN2*

**Discussion:**

**Decision: Noted.**

**R4-2009525 LS on UE capability xDD differentiation for SUL/SDL bands**

*Type: LS in For: Information  
 Original outgoing LS: R2-2006322, to RAN4, cc RAN1  
 Source: RAN2*

**Discussion:**

**Decision: Noted.**

**R4-2009526 LS on Clarification on RAN4 features of NE-DC**

*Type: LS in For: Information  
 Original outgoing LS: R2-2006352, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

**Decision: Noted.**

**R4-2009527 Reply LS on XDD-FRX Differentiation**

*Type: LS in For: Information  
 Original outgoing LS: R2-2006448, to RAN1, cc RAN4  
 Source: RAN2*

**Discussion:**

**Decision: Noted.**

**R4-2009528 Response LS on Exchange of information related to SRS-RSRP measurement resource configuration for UE-CLI**

*Type: LS in For: Information  
 Original outgoing LS: R3-204399, to RAN2, RAN1, cc RAN4  
 Source: RAN3*

**Discussion:**

**Decision: Noted.**

**R4-2009529 LS on ambiguity in output power requirements for power class 2 UE for EN-DC**

*Type: LS in For: Information  
 Original outgoing LS: R5-202805, to RAN4, cc -  
 Source: RAN5*

**Discussion:**

**Decision: Noted.**

**R4-2009530 LS on RF testing of 4Rx capable UE**

*Type: LS in For: Information  
 Original outgoing LS: R5-202806, to RAN4, cc -  
 Source: RAN5*

**Discussion:**

**Decision: Noted.**

**R4-2009531 LS on structure of NR CA reference sensitivity requirements in 38.101-1**

*Type: LS in For: Information  
 Original outgoing LS: R5-202963, to RAN4, cc -  
 Source: RAN5*

**Discussion:**

**Decision: Noted.**

**R4-2009532 LS on introducing UE capability for power class for NR band in MR-DC combination**

*Type: LS in For: Information  
 Original outgoing LS: RP-201392, to RAN2, cc RAN4  
 Source: RAN*

**Discussion:**

**Decision: Noted.**

**R4-2009533 New work item in SE21 on measurement methodologies for 5G AAS in the field**

*Type: LS in For: Information  
 Original outgoing LS: -, to RAN4, RAN, cc -  
 Source: CEPT ECC WG SE*

**Discussion:**

**Decision: Noted.**

## 4 Rel-15 New radio access technology

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

**R4-2011534           Email discussion summary for [96e][101] NR\_NewRAT\_SysParameters**

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

**Discussion:**

.

**Decision: Revised to R4-2011841 (from R4-2011534).**

**R4-2011841           Email discussion summary for [96e][101] NR\_NewRAT\_SysParameters**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011682           WF on 30k SCS support for n34 and n39 SSB**

*Type: others For: Approval*

*Source: CMCC*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011686           WF on UE capability xDD differentiation for SUL/SDL bands**

*Type: others For: Approval*

*Source: Nokia*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010108 Disucssion on support of 30KHz SCS for SSB of n34 and n39**

*Type: discussion For: Discussion  
 Source: CMCC*

**Discussion:**

**Decision: Noted.**

**R4-2010264 Reply LS on Clarification on RAN4 features of NE-DC**

*Type: LS out For: Approval  
 to RAN 2  
 Source: Samsung*

**Discussion:**

**Decision: Revised to R4-2011688 (from R4-2010264).**

**R4-2011688 Reply LS on Clarification on RAN4 features of NE-DC**

*Type: LS out For: Approval  
 to RAN 2  
 Source: Samsung*

**Discussion:**

**Decision: Return to.**

**R4-2010340 30k SSB SCS for Band n34 and n39**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0441 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce 30k SSB SCS for n34 and n39

**Discussion:**

**Decision: Revised to R4-2011683 (from R4-2010340).**

**R4-2011683 30k SSB SCS for Band n34 and n39**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0441 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce 30k SSB SCS for n34 and n39

**Discussion:**

**Decision: Return to.**

**R4-2010341 30k SSB SCS for Band n34 and n39**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0442 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce 30k SSB SCS for n34 and n39

**Discussion:**

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

**R4-2010342 Correction for 5 MHz channel bandwidth for n40 and n50**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0443 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the note (superscript) for the 5 MHz bandwidth for n40 and n50

**Discussion:**

**Decision: Agreed.**

**R4-2010343 Correction for 5 MHz channel bandwidth for n50 and introduction of Annex H**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0444 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the note (superscript) for the 5 MHz bandwidth for n50 and add the missing Annex H (CR not implemented)

**Discussion:**

**Decision: Agreed.**

**R4-2010536 On default SSB for band n34, and n39**

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

**Abstract:**

30kHz SSB SCS is proposed to be added.

**Discussion:**

**Decision: Noted.**

**R4-2010620 On NR bands n34 and n39 supporting 30kHz SSB SCS**

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

**Discussion:**

**Decision: Noted.**

**R4-2010621 CR to TS38.104: Add 30k SSB SCS for Band n34 and n39**

*Type: CR For: Agreement  
 38.104 v15.10.0 CR-0223 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Revised to R4-2011684 (from R4-2010621).**

**R4-2011684 CR to TS38.104: Add 30k SSB SCS for Band n34 and n39**

*Type: CR For: Agreement  
 38.104 v15.10.0 CR-0223 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Return to.**

**R4-2010622 CR to TS38.104: Add 30k SSB SCS for Band n34 and n39**

*Type: CR For: Agreement  
 38.104 v16.4.0 CR-0224 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010623 CR to TS38.101-1: Add 30k SSB SCS for Band n34 and n39**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0446 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Not pursued.**

**R4-2010624 CR to TS38.101-1: Add 30k SSB SCS for Band n34 and n39**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0447 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Withdrawn.**

**R4-2010788 Release independence support of new channel bandwidth from Rel-15**

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

**Discussion:**

**Decision: Noted.**

**R4-2010789 Draft CR to TS 38.307 Release independence support of new channel bandwidth from Rel-15**

*Type: draftCR For: Endorsement  
 38.307 v15.6.0  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

**Decision: Revised to R4-2011685 (from R4-2010789).**

**R4-2011685 Draft CR to TS 38.307 Release independence support of new channel bandwidth from Rel-15**

*Type: draftCR For: Endorsement  
 38.307 v15.6.0  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

**Decision: Return to.**

**R4-2011484 CR for 38.101-1 channel space for CA\_Rel15**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0472 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2011485 CR for 38.101-1 channel space for CA\_Rel16**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0473 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2011486 CR for 38.101-2 channel space for CA\_Rel15**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0255 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2011487 CR for 38.101-2 channel space for CA\_Rel16**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0256 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2009799 CR for R15 38.101-2: Clarification of the order of sub-blocks for intra-band non-contiguous CA**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0222 Cat: F (Rel-15)  
  
 Source: CATT*

**Discussion:**

**Decision: Not pursued.**

**R4-2009802 CR for R16 38.101-2: Correction of Table 5.4.3.3-1**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0225 Cat: F (Rel-16)  
  
 Source: CATT*

**Discussion:**

**Decision: Withdrawn.**

**R4-2010782 Draft reply LS on UE capability xDD differentiation for SUL/SDL bands**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

**Decision: Revised to R4-2011687 (from R4-2010782).**

**R4-2011687 Draft reply LS on UE capability xDD differentiation for SUL/SDL bands**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

**Decision: Return to.**

**R4-2011470 Response to LS on UE capability xDD differentiation for SUL/SDL bands**

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

**Abstract:**

In this contribution we provide the response to RAN2 on xDD differentiation for SUL/SDL bands.

**Discussion:**

**Decision: Noted.**

**R4-2009592 On UE capability xDD differentiation for SUL/SDL bands**

*Type: other For: Approval  
 Source: Nokia Japan*

**Abstract:**

This contribution aims at gaining a common understanding in RAN4 on if the below RAN2 understanding in R2-2006322 works or not to differentiate SUL or SDL bands as FDD or TDD, respectively. We also provide a draft LS in the Annex.

**Discussion:**

**Decision: Noted.**

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

**R4-2009704 Adding NR FDD Intra-band CA and FR1 3CC Inter-band CA into Release Independence**

*Type: CR For: Agreement  
 38.307 v15.6.0 CR-0026 Cat: B (Rel-15)  
  
 Source: Dish Network*

**Discussion:**

**Decision: Not pursued.**

**R4-2009705 Adding NR FDD Intra-band CA and FR1 3CC Inter-band CA into Release Independence**

*Type: CR For: Agreement  
 38.307 v16.3.0 CR-0027 Cat: A (Rel-16)  
  
 Source: Dish Network*

**Discussion:**

**Decision: Withdrawn.**

#### 4.2.1 [FR1] Maintenance for 38.101-1 [NR\_newRAT-Core]

**R4-2011535           Email discussion summary for [96e][102] NR\_NewRAT\_UE\_RF\_Part\_1**

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

**Discussion:**

.

**Decision: Revised to R4-2011842 (from R4-2011535).**

**R4-2011842           Email discussion summary for [96e][102] NR\_NewRAT\_UE\_RF\_Part\_1**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011747           WF on EVM measurement for UL-MIMO**

*Type: others For: Approval*

*Source: Anritsu*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011748           WF on Handling of additional requirements for UE co-ex in CA/DC**

*Type: others For: Approval*

*Source: Softbank*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011751           Reply LS on RF testing of 4Rx capable UE**

*Type: LS out For: Approval*

*Source: vivo*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011754           WF on structure of NR CA reference sensitivity requirements in 38.101-1**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011755           Reply LS on structure of NR CA reference sensitivity requirements in 38.101-1**

*Type: LS out For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011752           CR to 38.101-1: Correction of applicability of 2Rx requirements**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR- Cat: F (Rel-15)*

*Source: vivo*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011753           CR to 38.101-1: Correction of applicability of 2Rx requirements**

*Type: CR For: Agreement*

*38.101-1 v16.4.0 CR- Cat: A (Rel-16)  
Source: vivo*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010626 CR to TS 38.101-1: Correction on the Aggregated Channel Bandwidth**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0449 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Return to.**

**R4-2010627 CR to TS 38.101-1: Correction on the Aggregated Channel Bandwidth**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0450 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010810 On UL MIMO Tx EVM requirement**

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

**Discussion:**

**Decision: Noted.**

**R4-2010814 CR for 38.101-1 FRC corrections (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0457 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011749 (from R4-2010814).**

**R4-2011749 CR for 38.101-1 FRC corrections (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0457 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010815 CR for 38.101-1 FRC corrections (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0458 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2010827 Reply LS on RF testing of 4Rx capable UE**

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

**Discussion:**

**Decision: Noted.**

**R4-2011520 On the Transmit EVM Requirement for UL MIMO Transmission**

*Type: discussion For: Approval  
 Source: Lenovo, Motorola Mobility*

**Discussion:**

**Decision: Noted.**

**R4-2009702 Adding NR FDD non-contiguous Intra-band CA and FR1 3CC Inter-band CA into Release Independence**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0417 Cat: B (Rel-15)  
  
 Source: Dish Network*

**Discussion:**

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

**R4-2009703 Adding NR FDD Intra-band CA and FR1 3CC Inter-band CA into Release Independence**

*Type: CR For: Agreement  
 38.307 v16.3.0 CR-0025 Cat: A (Rel-16)  
  
 Source: Dish Network*

**Discussion:**

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

##### 4.2.1.1 Maintenance for Transmitter characteristics [NR\_newRAT-Core]

**R4-2010114 Corrections of Japan-related CA co-ex tables for REL-15 combo**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0434 Cat: F (Rel-15)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for REL-15 Japan related CA protections for 38.101-1.

**Discussion:**

**Decision: Agreed.**

**R4-2010115 Corrections of Japan-related CA co-ex tables for REL-15 combo**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0435 Cat: A (Rel-16)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Mirror CR for REL-15 combo. correction to REL-16 spec.

**Discussion:**

**Decision: Agreed.**

**R4-2010126 Handling of additional requirements for UE co-ex in CA/DC**

*Type: other For: Approval  
 Source: SoftBank Corp.*

**Abstract:**

This is to discuss how to capture Additional requirements for CA/DC in UE co-ex requirements and propose to fix the issue by the next meeting.

**Discussion:**

**Decision: Noted.**

**R4-2010800 Correction to uplink antenna connectors**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0455 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Discussion:**

**Decision: Return to.**

**R4-2010801 Correction to uplink antenna connectors**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0456 Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Discussion:**

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

**R4-2010804 Discussion on the number of Tx connectors**

*Type: discussion For: Approval  
 Source: Rohde & Schwarz*

**Discussion:**

**Decision: Noted.**

**R4-2011341 Applicability of DTRxSRS to SRS carrier switching and power class 2**

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

**Discussion:**

**Decision: Return to.**

**R4-2011342 Correction to configured power with allowance for SRS switching**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0464 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Not pursued.**

**R4-2011343 Correction to configured power with allowance for SRS switching**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0465 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Withdrawn.**

**R4-2011492 CR on PTRS configuration for UL RMC-Rel-15**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0474 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2011495 CR for 38.101-1 on minimum output power-Rel-15**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0476 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2011496 CR for 38.101-1 on minimum output power-Rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0477 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2011497 CR for 38.101-1 on corrections for AMPR-Rel-15**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0478 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2011498 CR for 38.101-1 on corrections for AMPR-Rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0479 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2009655 Clarification of assumption on EVM measurement for UL-MIMO**

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

**Abstract:**

In this contribution we discuss a necessity of the common assumption in the group on EVM for UL-MIMO.

**Discussion:**

**Decision: Noted.**

##### 4.2.1.2 Maintenance for Receiver characteristics [NR\_newRAT-Core]

**R4-2010022 CR to TS 38.101-1 R15: corrections on narrow band blocking for intra-band contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0425 Cat: F (Rel-15)  
  
 Source: Xiaomi*

**Abstract:**

Add the interferer offset value for 30 kHz SCS case for narrow band blocking for CA bandwidth class C

**Discussion:**

**Decision: Return to.**

**R4-2010023 CR to TS 38.101-1 R16: corrections on narrow band blocking for intra-band contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0426 Cat: A (Rel-16)  
  
 Source: Xiaomi*

**Discussion:**

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

**R4-2010796 Correction to RMC for 256QAM**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0453 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Discussion:**

**Decision: Not pursued.**

**R4-2010797 Correction to RMC for 256QAM**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0454 Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Discussion:**

**Decision: Withdrawn.**

**R4-2010926 CR for 38.101-1 to add the missing MSD for CA\_n41A-n78A (Rel-15)**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0461 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011750 (from R4-2010926).**

**R4-2011750 CR for 38.101-1 to add the missing MSD for CA\_n41A-n78A (Rel-15)**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0461 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010927 CR for 38.101-1 to add the missing MSD for CA\_n41A-n78A (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0462 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2010928 Discussion and reply draft LS on structure of NR CA reference sensitivity requirements in 38.101-1**

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

**Discussion:**

**Decision: Noted.**

**R4-2011235 Views and reply LS on RF testing of 4Rx UEs**

*Type: other For: Approval  
 Source: vivo*

**Discussion:**

**Decision: Noted.**

**R4-2011493 CR on PTRS configuration for UL RMC-Rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0475 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2009616 OOB blocking for Inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0410 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Agreed.**

**R4-2009617 OOB blocking for Inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0411 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Agreed.**

#### 4.2.2 [FR2] Maintenance for 38.101-2 [NR\_newRAT-Core]

**R4-2011536           Email discussion summary for [96e][103] NR\_NewRAT\_UE\_RF\_Part\_2**

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

**Discussion:**

.

**Decision: Revised to R4-2011843 (from R4-2011536).**

**R4-2011843           Email discussion summary for [96e][103] NR\_NewRAT\_UE\_RF\_Part\_2**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011694           WF on remaining issues on WRC-19 resolutions**

*Type: others For: Approval*

*Source: Nokia*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011695           WF on NR SCC UL power drop behavior in FR2**

*Type: others For: Approval*

*Source: Anritsu Corporation*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010224 modifiedMPR correction for FR2 REL15**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0229 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Revised to R4-2011691 (from R4-2010224).**

**R4-2011691 modifiedMPR correction for FR2 REL15**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0229 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Return to.**

**R4-2010225 modifiedMPR correction for FR2 REL16**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0230 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Revised to R4-2011692 (from R4-2010225).**

**R4-2011692 modifiedMPR correction for FR2 REL16**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0230 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Return to.**

**R4-2010322 CR to TS 38.101-2 on corrections to operating bands for intra-band CA (Rel-15)**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0233 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

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

**Discussion:**

**Decision: Return to.**

**R4-2010323 CR to TS 38.101-2 on corrections to operating bands for intra-band CA (Rel-16)**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0234 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

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

**Discussion:**

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

**R4-2011387 FR2 Minimum output power measurement period definition**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0245 Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011693 (from R4-2011387).**

**R4-2011693 FR2 Minimum output power measurement period definition**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0245 Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2011402 FR2 Minimum output power measurement period definition**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0246 Cat: A (Rel-16)  
  
 Source: Keysight Technologies UK Ltd*

**Discussion:**

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

##### 4.2.2.1 Regulatory Tx/Rx spurious emission limits handling [NR\_newRAT-Core]

**R4-2010589 CR for introduction of EESS protection for n257 into general spurious emission**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0238 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Agreed.**

**R4-2010614 CR for introduction of EESS protection for n257 into general spurious emission**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0239 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Agreed.**

**R4-2010615 Remaining issues on WRC-19 resolution**

*Type: other For: Approval  
 38.101-2 v..  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Noted.**

**R4-2011415 CR for introduction of EESS protection into additional spurious emission**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0247 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Not pursued.**

**R4-2011418 CR for introduction of EESS protection into additional spurious emission**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0248 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Withdrawn.**

**R4-2009593 On remaining issues for WRC-19**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Nokia Japan*

**Abstract:**

RAN4#95-e approved a “WF on WRC-19 outcome and impact on RAN4 specifications” [R4-2009141]. This contribution addresses the open issues captured in the WF.

**Discussion:**

**Decision: Noted.**

**R4-2009594 EESS protection related requirements for FR2 bands**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0214 Cat: F (Rel-15)  
  
 Source: Nokia Japan*

**Abstract:**

This CR addresse all the remaining issues captured in R4-2009141.

**Discussion:**

**Decision: Not pursued.**

**R4-2009595 EESS protection related requirements for FR2 bands**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0215 Cat: A (Rel-16)  
  
 Source: Nokia Japan*

**Abstract:**

This CR is a category A CR for R4-2009594 whose CR number is 214.

**Discussion:**

**Decision: Withdrawn.**

**R4-2009953 WRC-19 resolutions and impact to NR bands**

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

**Discussion:**

**Decision: Noted.**

**R4-2009954 CR to capture WRC-19 impact on NR bands in TR38.817-01**

*Type: CR For: Agreement  
 38.817-01 v15.5.0 CR-0020 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Revised to R4-2011689 (from R4-2009954).**

**R4-2011689 CR to capture WRC-19 impact on NR bands in TR38.817-01**

*Type: CR For: Agreement  
 38.817-01 v15.5.0 CR-0020 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Return to.**

**R4-2009955 CR to capture WRC-19 impact on NR bands in TR38.817-01 Cat-A**

*Type: CR For: Agreement  
 38.817-01 v16.1.0 CR-0021 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

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

##### 4.2.2.2 Maintenance for Transmitter characteristics [NR\_newRAT-Core]

**R4-2010630 CR to TS 38.101-2: Correction on the PC3 MPR description**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0242 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Agreed.**

**R4-2010631 CR to TS 38.101-2: Correction on the PC3 MPR description**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0243 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Agreed.**

**R4-2011513 CR on PTRS configuration for UL RMC-Rel-15**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0257 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2011514 CR on PTRS configuration for UL RMC-Rel-16**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0258 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Withdrawn.**

**R4-2009656 NR SCC UL power drop behaviour with EN-DC UE in FR2**

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

**Abstract:**

There is a case that an FR2 EN-DC UE stops transmitting NR SCC UL signals during the TRx measurement even though it is for a CA test

**Discussion:**

**Decision: Noted.**

**R4-2009657 CR on Minimum output power and Off power MBW definition in FR2**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0217 Cat: F (Rel-15)  
  
 Source: Anritsu Corporation*

**Abstract:**

Excluding ACLR, measurement bandwidth definitions in the Minimum output power and Off power have inconsistencies between FR1 and FR2.

**Discussion:**

**Decision: Agreed.**

**R4-2009658 CR on Minimum output power and Off power MBW definition in FR2**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0218 Cat: A (Rel-16)  
  
 Source: Anritsu Corporation*

**Abstract:**

Excluding ACLR, measurement bandwidth definitions in the Minimum output power and Off power have inconsistencies between FR1 and FR2.

**Discussion:**

**Decision: Agreed.**

**R4-2009659 Correction to a description of PRB for in-band emission with CA in FR2**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0219 Cat: F (Rel-15)  
  
 Source: Anritsu Corporation*

**Abstract:**

Description of in-band emission measurement interval in 6.4A.2.3 should be aligned with EVM and thus it should be the average of 10 sub-frames

**Discussion:**

**Decision: Not pursued.**

**R4-2009660 Correction to a description of PRB for in-band emission with CA in FR2**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0220 Cat: A (Rel-16)  
  
 Source: Anritsu Corporation*

**Abstract:**

Description of in-band emission measurement interval in 6.4A.2.3 should be aligned with EVM and thus it should be the average of 10 sub-frames

**Discussion:**

**Decision: Withdrawn.**

**R4-2009800 CR for R15 38.101-2: Correction of in-band emission tables**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0223 Cat: F (Rel-15)  
  
 Source: CATT*

**Discussion:**

**Decision: Revised to R4-2011690 (from R4-2009800).**

**R4-2011690 CR for R15 38.101-2: Correction of in-band emission tables**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0223 Cat: F (Rel-15)  
  
 Source: CATT*

**Discussion:**

**Decision: Return to.**

**R4-2009801 CR for R16 38.101-2: Correction of in-band emission tables**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0224 Cat: A (Rel-16)  
  
 Source: CATT*

**Discussion:**

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

**R4-2010302 Scope of Rel-16 tests/requirements for FR2 fallback band combination**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Noted.**

**R4-2011480 CR for modified MPR\_Rel-15**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0253 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2011481 CR for modified MPR\_Rel-16**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0254 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Withdrawn.**

**R4-2011491 on PTRS configuration for EVM requirement+LS to RAN5**

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

**Discussion:**

**Decision: Return to.**

**R4-2010628 CR to TS 38.101-2: Correction on the Aggregated Channel Bandwidth**

*Type: CR For: Agreement  
 38.101-2 v15.10.0 CR-0240 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Return to.**

**R4-2010629 CR to TS 38.101-2: Correction on the Aggregated Channel Bandwidth**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0241 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

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

##### 4.2.2.3 Maintenance for Receiver characteristics [NR\_newRAT-Core]

#### 4.2.3 Maintenance for 38.101-3 [NR\_newRAT-Core]

**R4-2011537           Email discussion summary for [96e][104] NR\_NewRAT\_UE\_RF\_Part\_3**

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

**Discussion:**

.

**Decision: Revised to R4-2011844 (from R4-2011537).**

**R4-2011844           Email discussion summary for [96e][104] NR\_NewRAT\_UE\_RF\_Part\_3**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2010825 CR for 38.101-3 Correction on EN-DC synchronous carriers (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0341 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010826 CR for 38.101-3 Correction on EN-DC synchronous carriers (R16)**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0342 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2009964 CR to 38.101-3 MSD due to UL harmonics and intermodulation interference**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0316 Cat: B (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Revised to R4-2011760 (from R4-2009964).**

**R4-2011760 CR to 38.101-3 MSD due to UL harmonics and intermodulation interference**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0316 Cat: B (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Return to.**

**R4-2009965 CR to 38.101-3 MSD due to UL harmonics and intermodulation interference R16**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0317 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

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

##### 4.2.3.1 [FR1] Maintenance for Transmitter characteristics within FR1 [NR\_newRAT-Core]

**R4-2010123 Corrections of Japan-related EN-DC co-ex tables for REL-15 combo**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0325 Cat: F (Rel-15)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for REL-15 Japan related EN-DC protections for 38.101-3.

**Discussion:**

**Decision: Revised to R4-2011759 (from R4-2010123).**

**R4-2011759 Corrections of Japan-related EN-DC co-ex tables for REL-15 combo**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0325 Cat: F (Rel-15)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for REL-15 Japan related EN-DC protections for 38.101-3.

**Discussion:**

**Decision: Return to.**

**R4-2010124 Corrections of Japan-related EN-DC co-ex tables for REL-15 combo**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0326 Cat: A (Rel-16)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Mirror CR for REL-15 combo. correction to REL-16 spec.

**Discussion:**

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

**R4-2010598 Remove power-class ambiguity for UL-MIMO PC2 capable UE configured for EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0333 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: Return to.**

**R4-2010921 CR for 38.101-3 to correct spurious emission band UE co-existence for DC\_1\_n28 (Rel-15)**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0345 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010922 CR for 38.101-3 to correct spurious emission band UE co-existence for DC\_1\_n28 (Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0346 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Withdrawn.**

**R4-2009661 Correction to in-band emissions for intra-band contiguous EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0308 Cat: F (Rel-15)  
  
 Source: Anritsu Corporation*

**Abstract:**

Correction of incorrect reference at 6.4B.2.1.3.

**Discussion:**

**Decision: Agreed.**

**R4-2009662 Correction to in-band emissions for intra-band contiguous EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0309 Cat: A (Rel-16)  
  
 Source: Anritsu Corporation*

**Abstract:**

Correction of incorrect reference at 6.4B.2.1.3.

**Discussion:**

**Decision: Agreed.**

**R4-2009975 CR to correct protected band of intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0318 Cat: F (Rel-15)  
  
 Source: KDDI Corporation*

**Discussion:**

**Decision: Agreed.**

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

##### 4.2.3.3 [FR1] Maintenance for Receiver characteristics within FR1 [NR\_newRAT-Core]

**R4-2010020 CR to TS 38.101-3 R15: corrections on MSD table for EN-DC FR1**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0320 Cat: F (Rel-15)  
  
 Source: Xiaomi*

**Abstract:**

1. Adding the Uplink configurations for DC\_5-n78

2. Revising the note13 in table 7.3B.2.3.1-1 to add ?FHD for DC\_28\_n51 and DC\_66\_n78

**Discussion:**

**Decision: Not pursued.**

**R4-2010021 CR to TS 38.101-3 R16: corrections on MSD table for EN-DC FR1**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0321 Cat: A (Rel-16)  
  
 Source: Xiaomi*

**Discussion:**

**Decision: Withdrawn.**

**R4-2010045 FR1 EN-DC Out-of-Band Blocking UL test configuration**

*Type: discussion For: Approval  
 38.101-3 v..  
 Source: Apple Inc.*

**Discussion:**

**Decision: Noted.**

**R4-2010046 CR for TS 38.101-3: FR1 inter-band EN-DC out-of-band blocking UL configuration**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0322 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Return to.**

**R4-2010047 CR for TS 38.101-3: FR1 inter-band EN-DC out-of-band blocking UL configuration**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0323 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

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

**R4-2010320 UE UL Power setting for OoBB for inter-band EN-DC within FR1**

*Type: other For: Approval  
 38.101-1 v..  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Noted.**

**R4-2010794 Addition of missing exception for n78**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0339 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Discussion:**

**Decision: Not pursued.**

**R4-2010795 Addition of missing exception for n78**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0340 Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Discussion:**

**Decision: Withdrawn.**

**R4-2011460 CR to 38.101-3 - Correction DC\_42\_n79 simultaneous Tx/Rx operation**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0348 Cat: F (Rel-15)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Wether DC\_42\_n79 supports simultaneous Tx/Rx is ambiguous, it cannot be supported by solutions implemented with n77 or n78 filter without MSD as already shown for CA\_n79-n79

**Discussion:**

**Decision: Return to.**

**R4-2009623 CR for missing DC\_1A\_n40A Cross Band Noise MSD for large NR UL BW in 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0304 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Revised to R4-2011756 (from R4-2009623).**

**R4-2011756 CR for missing DC\_1A\_n40A Cross Band Noise MSD for large NR UL BW in 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0304 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Return to.**

**R4-2009624 CR for missing DC\_1A\_n40A Cross Band Noise MSD for large NR UL BW in 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0305 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

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

**R4-2009625 CR for missing IMD MSD in 38.101-3 for DC\_1A-41A\_n78A, DC\_7A-28A\_n78A**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0306 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Revised to R4-2011757 (from R4-2009625).**

**R4-2011757 CR for missing IMD MSD in 38.101-3 for DC\_1A-41A\_n78A, DC\_7A-28A\_n78A**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0306 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Return to.**

**R4-2009626 CR for missing IMD MSD in 38.101-3 for DC\_1A-41A\_n78A, DC\_7A-28A\_n78A**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0307 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

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

**R4-2009663 Testability issue with OoBB for FR1 EN-DC UE (3)**

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

**Abstract:**

In this contribution we summarize the current status of discussions and try to create a common test assumption for this requirement.

**Discussion:**

**Decision: Noted.**

**R4-2009664 CR to 7.3B.2.3 BW, SCS and UL RB condition extension**

*Type: CR For: Agreement  
 38.101-3 v15.10.0 CR-0310 Cat: F (Rel-15)  
  
 Source: Anritsu Corporation*

**Abstract:**

Added Note so that the value of Minimum requirement can be extended and interpreted to other SCS and BW.

**Discussion:**

**Decision: Return to.**

**R4-2009665 CR to 7.3B.2.3 BW, SCS and UL RB condition extension**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0311 Cat: A (Rel-16)  
  
 Source: Anritsu Corporation*

**Abstract:**

Added Note so that the value of Minimum requirement can be extended and interpreted to other SCS and BW.

**Discussion:**

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

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

## 5 LTE maintenance (up to Rel15) [WI code or TEI]

### 5.2 UE RF requirements [WI code or TEI]

**R4-2011538           Email discussion summary for [96e][105] LTE\_Maintenance**

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

**Discussion:**

.

**Decision: Revised to R4-2011845 (from R4-2011538).**

**R4-2011845           Email discussion summary for [96e][105] LTE\_Maintenance**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2010581 NBIOT standalone operation for FCC regulation considerations**

*Type: discussion For: Discussion  
 36.101 v..  
 Source: MediaTek Inc.*

**Discussion:**

**Decision: Noted.**

**R4-2010582 CR for TS 36.101: CR for category NB1 against FCC regulation in standalone mode**

*Type: CR For: Agreement  
 36.101 v14.15.0 CR-5664 Cat: F (Rel-14)  
  
 Source: MediaTek Inc.*

**Discussion:**

**Decision: Revised to R4-2011696 (from R4-2010582).**

**R4-2011696 CR for TS 36.101: CR for category NB1 against FCC regulation in standalone mode**

*Type: CR For: Agreement  
 36.101 v14.15.0 CR-5664 Cat: F (Rel-14)  
  
 Source: MediaTek Inc.*

**Discussion:**

**Decision: Return to.**

**R4-2010583 CR for TS 36.101: CR for category NB1 against FCC regulation in standalone mode**

*Type: CR For: Agreement  
 36.101 v15.11.0 CR-5665 Cat: A (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

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

**R4-2010584 CR for TS 36.101: CR for category NB1 against FCC regulation in standalone mode**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5666 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

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

**R4-2010937 Update to NB-IOT aggregate power control tolerance for TDD**

*Type: CR For: Agreement  
 36.101 v15.11.0 CR-5668 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010963 Update to NB-IOT aggregate power control tolerance for TDD**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5670 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2011336 Further considerations on NB-IoT to meet FCC regulatory requirements**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Noted.**

**R4-2011400 Test frequencies for NB-IOT UE in standalone operation**

*Type: other For: Discussion  
 Source: Sony*

**Discussion:**

**Decision: Noted.**

**R4-2009546 Correction to band 85 spurious emission limits UE co-existence**

*Type: CR For: Agreement  
 36.101 v15.11.0 CR-5652 Cat: F (Rel-15)  
  
 Source: Sequans Communications*

**Abstract:**

Spurious emission limits for band 85 into protected DL band 51 should be listed with Note 2

**Discussion:**

**Decision: Agreed.**

**R4-2009547 Correction to band 85 spurious emission limits UE co-existence**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5653 Cat: A (Rel-16)  
  
 Source: Sequans Communications*

**Abstract:**

Spurious emission limits for band 85 into protected DL band 51 should be listed with Note 2

**Discussion:**

**Decision: Agreed.**

## 6 Rel-16 Work Items for LTE

### 6.5 R16 LTE maintenance [WI code]

#### 6.5.2 UE RF requirements [WI code]

**R4-2010227 A-MPR definition for CA\_48B**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5656 Cat: B (Rel-16)  
  
 Source: Nokia*

**Discussion:**

**Decision: Revised to R4-2011699 (from R4-2010227).**

**R4-2011699 A-MPR definition for CA\_48B**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5656 Cat: B (Rel-16)  
  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010702 CR to 36.101 to correct band combinations in Rel-16**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5667 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to 36.101 to correct band combinations in Rel-16

**Discussion:**

**Decision: Agreed.**

**R4-2011521 CR to 36.101 Removal band 10 protection**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5673 Cat: F (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Return to.**

**R4-2011525 CR to 36.101 Removal of CA\_NS\_08**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5674 Cat: F (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Revised to R4-2011698 (from R4-2011525).**

**R4-2011698 CR to 36.101 Removal of CA\_NS\_08**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5674 Cat: F (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Return to.**

**R4-2011526 CR to 36.101 Correction to CA\_NS\_10**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5675 Cat: F (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Agreed.**

**R4-2011527 DeltaTRxSRS for LTE Pcmax**

*Type: discussion For: Approval  
 36.101 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Return to.**

**R4-2009938 Coexistence cleanup for 36101 Rel16**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5654 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Revised to R4-2011697 (from R4-2009938).**

**R4-2011697 Coexistence cleanup for 36101 Rel16**

*Type: CR For: Agreement  
 36.101 v16.6.0 CR-5654 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Return to.**

## 7 Rel-16 non-spectrum related work items for NR

### 7.1 NR-based access to unlicensed spectrum [NR\_unlic]

#### 7.1.1 System Parameters [NR\_unlic-Core]

**R4-2011539           Email discussion summary for [96e][106] NR\_unlic\_SysParameters**

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

**Discussion:**

.

**Decision: Revised to R4-2011846 (from R4-2011539).**

**R4-2011846           Email discussion summary for [96e][106] NR\_unlic\_SysParameters**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011700           LS reply to RAN1on UE capability on wideband carrier operation for NR-U**

*Type: LS out For: Approval*

*Source: MediaTek*

**Discussion:**

.

**Decision:                    Return to.**

##### 7.1.1.1 Bands and band plans [NR\_unlic-Core]

**R4-2010459 NR-U 6 GHz band in Korea**

*Type: discussion For: Information  
 Source: LG Electronics Finland*

**Abstract:**

Korea’s Ministry of Science and ICT has issued an amendment of technical standards, including proposed rules for 5925 – 7125MHz frequency band. Public consultation period is ongoing. This document presents the key technical points included in proposed rul

**Discussion:**

**Decision: Noted.**

**R4-2010495 Consideration on 6GHz band definition**

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

**Discussion:**

**Decision: Noted.**

**R4-2010744 Details on introduction of 6 GHz band for NR-U operation**

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

**Abstract:**

In this contribution we discuss further details including band numbers for NR-U in 6 GHz range and provide TP. Discussion focuses on BS requirements.

**Discussion:**

**Decision: Noted.**

**R4-2010958 Discussion on 6GHz for NR-U**

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

**Discussion:**

**Decision: Noted.**

##### 7.1.1.2 Wideband operation related [NR\_unlic-Core]

**R4-2010310 Discussion on LS on UE capability on wideband carrier operation for NR-U**

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

**Discussion:**

**Decision: Noted.**

**R4-2010438 NR-U - On intra-band CA and wideband operation modes**

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

**Discussion:**

**Decision: Withdrawn.**

**R4-2010498 Spectrum utilization for NR-U**

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

**Discussion:**

**Decision: Noted.**

**R4-2011447 NR-U - On intra-band CA and wideband operation modes**

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

**Discussion:**

**Decision: Noted.**

**R4-2009901 Co-existence challenges with NR-U 100MHz channel bandwidth and other technologies**

*Type: discussion For: Approval  
 Source: Charter Communications Inc.*

**Discussion:**

**Decision: Noted.**

**R4-2009933 Remaining issues on NR-U wideband operation**

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

**Discussion:**

**Decision: Noted.**

##### 7.1.1.3 Others [NR\_unlic-Core]

**R4-2010499 Proposals on 100MHz CBW in NR-U**

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

**Discussion:**

**Decision: Noted.**

**R4-2010671 Discussion and TP for further clarification of NR-U BW Class requirements and intra-band contiguous CA with LBT failure**

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

**Discussion:**

**Decision: Noted.**

**R4-2011330 [NRU] LO Leakage Exception Issue and NRU Mask Measurement Procedure**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution we provide a description of the LO leakage issue for the NRU mask together with detailing the 11ax mask measurement procedure and its applicability to NRU.

**Discussion:**

**Decision: Noted.**

**R4-2009934 NR-U CA BW Classes**

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

**Discussion:**

**Decision: Noted.**

#### 7.1.2 UE RF requirements [NR\_unlic-Core]

**R4-2011540           Email discussion summary for [96e][107] NR\_unlic\_UE\_RF**

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

**Discussion:**

.

**Decision: Revised to R4-2011847 (from R4-2011540).**

**R4-2011847           Email discussion summary for [96e][107] NR\_unlic\_UE\_RF**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011702           Draft CR to 38.101-3 on out-of-band blocking for NSA operation**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0*

*Source: Ericsson*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010585 Architecture discussion for NRU 6GHz**

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

**Discussion:**

**Decision: Noted.**

**R4-2010740 CR to TS 37.106 with introduction of NR-U feature**

*Type: CR For: Agreement  
 37.106 v16.0.0 CR-0001 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This CR introduces NR-U feature to specification TS 37.106.

**Discussion:**

Chair: the CR is agreeable based on first round discussion. Decision deferred to agree all CRs in a package

**Decision: Return to.**

##### 7.1.2.1 Transmitter characteristics [NR\_unlic-Core]

**R4-2010273 [NRU] UE TX measurements and requirements for MPR and A-MPR**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution we provide our measurements results and proposals partially covering MPR/A-MPR, 6GHz band, 100MHz channe and PC3 requirements with the aim to finalize PC5 MPR and A-MPR for 5 and 6GHz bands and progress the other subjects.

**Discussion:**

**Decision: Noted.**

**R4-2010344 Additional TX requirements for NR-U operation**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Background to additional TX requirements for NR-U, e.g. A-MPR for wideband operation, time mask

**Discussion:**

**Decision: Noted.**

**R4-2010345 Introduction of additional TX requirements for NR-U operation**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Ericsson*

**Abstract:**

CR to introduce additional TX requirements for NR-U based on the running CR

**Discussion:**

**Decision: Not pursued.**

**R4-2010497 Discussion on NR-U UE ACLR and MPR evaluation**

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

**Discussion:**

**Decision: Noted.**

**R4-2010586 Transmitter requirements consideration for NRU 6GHz**

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

**Discussion:**

**Decision: Noted.**

**R4-2011344 Simulation results for NR-U bands n46 and n96**

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

**Discussion:**

**Decision: Noted.**

**R4-2011345 Remaining UE RF requirements for stand-alone single carrier NR-U**

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

**Discussion:**

**Decision: Noted.**

**R4-2011347 Introduction of NR-based access to unlicensed spectrum**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0466 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Nokia*

**Discussion:**

**Decision: Revised to R4-2011701 (from R4-2011347).**

**R4-2011701 Introduction of NR-based access to unlicensed spectrum**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0466 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2009942 NR-U MPR for PC5**

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

**Discussion:**

**Decision: Noted.**

##### 7.1.2.2 Receiver characteristics [NR\_unlic-Core]

**R4-2010346 Additional RX requirements for NR-U operation**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Background to additional RX requirements for NR-U, e.g. ACS and blocking requirements

**Discussion:**

**Decision: Noted.**

**R4-2010347 Introduction of additional RX requirements for NR-U operation**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Ericsson*

**Abstract:**

CR to introduce additional RX requirements for NR-U based on the running CR

**Discussion:**

**Decision: Not pursued.**

**R4-2010496 Discussion on NR-U UE ACS**

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

**Discussion:**

**Decision: Noted.**

**R4-2011346 Introduction of NR-based access to unlicensed spectrum**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Qualcomm Incorporated*

**Abstract:**

This is the running CR based on agreed R4-2009175 updated to v16.4.0 of 38.101-1.

**Discussion:**

**Decision: Not pursued.**

**R4-2009966 ACS requirement for NR-U**

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

**Discussion:**

**Decision: Noted.**

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

### 7.3 5G V2X with NR sidelink [5G\_V2X\_NRSL]

#### 7.3.1 General [5G\_V2X\_NRSL]

**R4-2011541           Email discussion summary for [96e][108] 5G\_V2X\_NRSL\_UE\_RF**

*Type: other For: Information  
 Source: Moderator (LG Electronics)*

**Discussion:**

.

**Decision: Revised to R4-2011848 (from R4-2011541).**

**R4-2011848           Email discussion summary for [96e][108] 5G\_V2X\_NRSL\_UE\_RF**

*Type: other For: Information  
 Source: Moderator (LG Electronics)*

**Discussion:**

.

**Decision: Return to.**

**R4-2011681           Reply LS on RAN1 UE feature lists for 5G V2X service**

*Type: LS out For: Approval*

*Source: LG Electronics*

**Discussion:**

.

**Decision: Approved.**

**R4-2011703           WF on A-MPR for NS\_33**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011704           WF on A-MPR for NS\_52**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011708           WF on REFSENS requirements for NR V2X UE at licensed band/unlicensed bands**

*Type: others For: Approval*

*Source: LG Electronics*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011709           WF on NR V2X FRC parameters**

*Type: others For: Approval*

*Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011710           LS to RAN5 on measurement point for 5G V2X UE**

*Type: LS out For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010287 Further discussion on the applicability of minimum requirements for NR V2X**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

**Decision: Noted.**

**R4-2010772 Discussion on V2X power class reporting**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

**Decision: Noted.**

**R4-2010822 On NR V2X reference measurement channels**

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

**Discussion:**

**Decision: Noted.**

**R4-2010823 draft CR for TS 38.101-1: NR V2X FRC**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011711 (from R4-2010823).**

**R4-2011711 draft CR for TS 38.101-1: NR V2X FRC**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010824 draft CR for TR 38.886: NR V2X FRC**

*Type: draftCR For: Endorsement  
 38.886 v16.0.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2009828 On general requirement and additional requirement for NR V2X**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

#### 7.3.2 System parameters maintenance [5G\_V2X\_NRSL-Core]

**R4-2011542           Email discussion summary for [96e][109] 5G\_V2X\_NRSL\_SysParameters**

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

**Discussion:**

.

**Decision: Revised to R4-2011849 (from R4-2011542).**

**R4-2011849           Email discussion summary for [96e][109] 5G\_V2X\_NRSL\_SysParameters**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011712           WF on BS impact of NR V2X**

*Type: others For: Approval*

*Source: CATT*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010606 on remaining issue for UE operations for licensed bands partially used for SL transmission**

*Type: discussion For: (not specified)  
 Source: Xiaomi*

**Discussion:**

**Decision: Noted.**

**R4-2009825 CR for TS 38.104, Introduce BS impact of NR V2X**

*Type: CR For: Agreement  
 38.104 v16.4.0 CR-0217 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

**Decision: Not pursued.**

**R4-2009827 On BS impact of NR V2X**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

#### 7.3.3 UE RF requirements maintenance [5G\_V2X\_NRSL-Core]

**R4-2010137 Correction on NR V2X UE RF requirements for single carrier in TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0437 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Discussion:**

**Decision: Revised to R4-2011705 (from R4-2010137).**

**R4-2011705 Correction on NR V2X UE RF requirements for single carrier in TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0437 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Discussion:**

**Decision: Return to.**

**R4-2010139 Correction on TR38.886 for V2X UE Tx and Rx requirements**

*Type: CR For: Agreement  
 38.886 v16.0.0 CR-0003 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Discussion:**

**Decision: Not pursued.**

**R4-2010288 CR on TS 38.101-1 for NR V2X**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0440 Cat: F (Rel-16)  
  
 Source: vivo*

**Discussion:**

**Decision: Revised to R4-2011706 (from R4-2010288).**

**R4-2011706 CR on TS 38.101-1 for NR V2X**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0440 Cat: F (Rel-16)  
  
 Source: vivo*

**Discussion:**

**Decision: Return to.**

##### 7.3.3.1 Transmitter characteristics [5G\_V2X\_NRSL-Core]

**R4-2010014 V2X TX Issues**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

Proposals on how to define V2X TX Diversity, clarification of location for TX specs when components external to the UE are present and switching time between NR SL and LTE SL are presented

**Discussion:**

**Decision: Noted.**

**R4-2010025 Components external to UE**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0427 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Proposes wording to clarify the location of the transceiver specifications when components external to the UE are present

**Discussion:**

**Decision: Not pursued.**

**R4-2010026 NS\_52 emissions correction**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0428 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Correction to remove a table that was erroneously inserted into the NS\_52 specifications as an additional specification

**Discussion:**

**Decision: Revised to R4-2011707 (from R4-2010026).**

**R4-2011707 NS\_52 emissions correction**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0428 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Correction to remove a table that was erroneously inserted into the NS\_52 specifications as an additional specification

**Discussion:**

**Decision: Return to.**

**R4-2010028 V2X A-MPR tables for SSSB, PFSCH**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0430 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

A-MPR tables are proposed for NS\_33, NS\_NEW and NS\_52 that could not be finalized in RAN4#95-e

**Discussion:**

**Decision: Not pursued.**

**R4-2010113 TP on V2X A-MPR for SSSB, PFSCH, PSSCH, PSCCH**

*Type: other For: Approval  
 38.886 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

TP to TR 38.886 on A-MPR specifications for SSSB, PSFCH, PSCCH, PSSCH

**Discussion:**

**Decision: Noted.**

**R4-2010135 Remaining MPR/A-MPR requirements for NR V2X UE**

*Type: other For: Approval  
 Source: LG Electronics France*

**Discussion:**

**Decision: Noted.**

**R4-2010929 Discussion on remaining AMPR requirements for PC3 V2X UE**

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

**Discussion:**

**Decision: Noted.**

**R4-2010930 CR for 38.101-1 to specify AMPR requirements for PC3 NR V2X in band n47**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0463 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

##### 7.3.3.2 Receiver characteristics [5G\_V2X\_NRSL-Core]

**R4-2010013 REFSENS requirements and LLS results of REFSENS for NR V2X UE**

*Type: other For: Approval  
 Source: LG Electronics Inc.*

**Discussion:**

**Decision: Noted.**

**R4-2010015 V2X RX Issues**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

Proposals for RX diversity gain, reference channels simulations for V2X, new REFSENS values for n47/n38 and how to clarify the location of RX specifications when components external to the UE are present is described.

**Discussion:**

**Decision: Noted.**

**R4-2010027 REFSENS for V2X**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0429 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

New REFSENS values are proposed for n47 and n38 based on new LCRB definition

**Discussion:**

**Decision: Not pursued.**

**R4-2010817 SNR evaluation for NR V2X**

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

**Discussion:**

**Decision: Noted.**

**R4-2009823 CR for TS 38.101-1, REFSENS requirements for NR V2X band n38**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0420 Cat: F (Rel-16)  
  
 Source: CATT*

**Discussion:**

**Decision: Not pursued.**

**R4-2009826 REFSENS requirements for NR V2X band n38**

*Type: CR For: Agreement  
 38.886 v16.0.0 CR-0001 Cat: F (Rel-16)  
  
 Source: CATT*

**Discussion:**

**Decision: Not pursued.**

**R4-2010818 On NR V2X SL allocated RB size numbers for different CBWs**

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

**Discussion:**

**Decision: Noted.**

#### 7.3.4 Concurrent operation maintenance (scenarios, requirements, etc) [5G\_V2X\_NRSL-Core]

**R4-2011543           Email discussion summary for [96e][110] 5G\_V2X\_NRSL\_UE\_Concurrent**

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

**Discussion:**

.

**Decision: Revised to R4-2011850 (from R4-2011543).**

**R4-2011850           Email discussion summary for [96e][110] 5G\_V2X\_NRSL\_UE\_Concurrent**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011713           LS on definition of NR V2X con-current operation**

*Type: LS out For: Approval*

*Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011714           WF on NR-V2X switching period**

*Type: others For: Approval*

*Source: CATT*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010138 Correction on NR V2X inter-band con-current UE RF requirements in TS38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0329 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Discussion:**

**Decision: Revised to R4-2011717 (from R4-2010138).**

**R4-2011717 Correction on NR V2X inter-band con-current UE RF requirements in TS38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0329 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Discussion:**

**Decision: Return to.**

**R4-2010289 CR on TS 38.101-3 for NR V2X**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0330 Cat: F (Rel-16)  
  
 Source: vivo*

**Discussion:**

**Decision: Revised to R4-2011718 (from R4-2010289).**

**R4-2011718 CR on TS 38.101-3 for NR V2X**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0330 Cat: F (Rel-16)  
  
 Source: vivo*

**Discussion:**

**Decision: Return to.**

**R4-2010605 on remaining issue for con-current operation**

*Type: discussion For: (not specified)  
 Source: Xiaomi*

**Abstract:**

In this contribution, we give discussion on remaining issue on concurrent operation

**Discussion:**

**Decision: Noted.**

**R4-2010821 Correction CR for TS 38.101-3: NR V2X con-current operation**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011715 (from R4-2010821).**

**R4-2011715 Correction CR for TS 38.101-3: NR V2X con-current operation**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

##### 7.3.4.1 Transmitter characteristics [5G\_V2X\_NRSL-Core]

**R4-2010290 Further discussion on con-current operation for NR V2X**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

**Decision: Noted.**

**R4-2010457 On switching period for NR V2X in ITS band**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

**R4-2010819 On switching period for LTE SL and NR SL**

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

**Discussion:**

**Decision: Noted.**

**R4-2009824 CR for TS 38.101-3, Time mask for TDM between NR V2X and LTE V2X**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0312 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

**Decision: Not pursued.**

**R4-2009829 Switching period for NR V2X in ITS band**

*Type: CR For: Agreement  
 38.886 v16.0.0 CR-0002 Cat: F (Rel-16)  
  
 Source: CATT*

**Discussion:**

**Decision: Revised to R4-2011716 (from R4-2009829).**

**R4-2011716 Switching period for NR V2X in ITS band**

*Type: CR For: Agreement  
 38.886 v16.0.0 CR-0002 Cat: F (Rel-16)  
  
 Source: CATT*

**Discussion:**

**Decision: Return to.**

##### 7.3.4.2 Receiver characteristics [5G\_V2X\_NRSL-Core]

**R4-2010136 MSD Analysis results and harmonic reduction filter for V2X\_20A\_n38A**

*Type: other For: Approval  
 Source: LG Electronics France*

**Discussion:**

**Decision: Noted.**

**R4-2010820 On Rx remaing requirements for NR V2X con-current operation**

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

**Discussion:**

**Decision: Noted.**

**R4-2009577 MSD analysis on NR V2X UE for V2X\_20\_n38**

*Type: discussion For: (not specified)  
 Source: Xiaomi Communications*

**Discussion:**

**Decision: Noted.**

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

#### 7.5.1 General [LTE\_NR\_DC\_CA\_enh-Core]

#### 7.5.2 RF requirements maintenance [LTE\_NR\_DC\_CA\_enh-Core]

**R4-2011544           Email discussion summary for [96e][111] LTE\_NR\_DC\_CA\_enh\_RF**

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

**Discussion:**

.

**Decision: Revised to R4-2011851 (from R4-2011544).**

**R4-2011851           Email discussion summary for [96e][111] LTE\_NR\_DC\_CA\_enh\_RF**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011719           Clarification on the network and UE behaviors between “Only single switched UL” and “SUO/SUO allowed”**

*Type: others For: Information*

*Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011720           Switching time mask for inter-band EN-DC UEs only supporting single switched UL**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR- Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011721           Reply LS on power control for NR-DC**

*Type: LS out For: Approval*

*Source: vivo*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010534 Discussion and draft Reply LS on power control for NR-DC**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Noted.**

**R4-2010535 Introduction of p-Max to FR2**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0236 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Not pursued.**

**R4-2010850 On p-UE-FR2 for Rel-16**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

**Decision: Noted.**

**R4-2010932 Further discussion on RF requirements about DC\_12\_n71**

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

**Discussion:**

**Decision: Noted.**

**R4-2011524 Mandatory Single Uplink Operation for EN-DC**

*Type: discussion For: Approval  
 38.101-3 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Noted.**

### 7.9 Enhancements on MIMO for NR [NR\_eMIMO]

#### 7.9.1 UE RF core requirements (38.101) [NR\_eMIMO-Core]

**R4-2011545           Email discussion summary for [96e][112] NR\_eMIMO\_UE\_RF**

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

**Discussion:**

.

**Decision: Revised to R4-2011852 (from R4-2011545).**

**R4-2011852           Email discussion summary for [96e][112] NR\_eMIMO\_UE\_RF**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011761           WF on Remaining Issues for ULFPTx**

*Type: others For: Approval*

*Source: Samsung*

**Discussion:**

.

**Decision:                    Return to.**

##### 7.9.1.1 DMRS enhancement with PI/2 BPSK [NR\_eMIMO-Core]

**R4-2010029 Pi\_2 BPSK DMRS**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0431 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

CR to introduce pi/2-BPSK DMRS into TS38.101-1

**Discussion:**

**Decision: Return to.**

**R4-2010813 On Pi/2 BPSK DMRS**

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

**Discussion:**

**Decision: Noted.**

##### 7.9.1.2 Uplink Tx Full Power transmission [NR\_eMIMO-Core]

**R4-2010096 On the Remaining Issues of Uplink Full Power Transmission (ULFPTx)**

*Type: discussion For: Approval  
 Source: Samsung*

**Discussion:**

**Decision: Noted.**

**R4-2010097 CR to TS38.101-1 on introduction of Uplink Full Power Transmission**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0433 Cat: B (Rel-16)  
  
 Source: Samsung, Qualcomm*

**Discussion:**

**Decision: Revised to R4-2011762 (from R4-2010097).**

**R4-2011762 CR to TS38.101-1 on introduction of Uplink Full Power Transmission**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0433 Cat: B (Rel-16)  
  
 Source: Samsung, Qualcomm*

**Discussion:**

**Decision: Return to.**

**R4-2010811 On NR eMIMO full power transmission**

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

**Discussion:**

**Decision: Noted.**

**R4-2010812 draft CR for TS 38.101-1: update of eMIMO requirements for ULFPTx**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011763 (from R4-2010812).**

**R4-2011763 draft CR for TS 38.101-1: update of eMIMO requirements for ULFPTx**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2011450 CR to TS38.101-2 on ULFPTx and UE SRS port configuration clarification**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0249 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

We discuss applicability of Rel-16 PA modes to FR2

**Discussion:**

**Decision: Revised to R4-2011764 (from R4-2011450).**

**R4-2011764 CR to TS38.101-2 on ULFPTx and UE SRS port configuration clarification**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0249 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

We discuss applicability of Rel-16 PA modes to FR2

**Discussion:**

**Decision: Return to.**

### 7.11 RF requirements for NR frequency range 1 (FR1) [NR\_RF\_FR1]

#### 7.11.1 RF core requirements [NR\_RF\_FR1-Core ]

**R4-2011546           Email discussion summary for [96e][113] NR\_RF\_FR1\_Part\_1**

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

**Discussion:**

.

**Decision: Revised to R4-2011853 (from R4-2011546).**

**R4-2011853           Email discussion summary for [96e][113] NR\_RF\_FR1\_Part\_1**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011722           LS on additional DC location reporting for intra-band UL CA**

*Type: LS out For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011724           LS on FR1 intra-band UL CA UE capability**

*Type: LS out For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011726           CR on CA\_NS\_04 and CA\_NS\_06 AMPR and ASE requirements**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR- Cat: B (Rel-16)  
  
 Source: Skyworks*

**Discussion:**

.

**Decision:                    Return to.**

##### 7.11.1.1 Intra-band contiguous DL CA for FR1 [NR\_RF\_FR1-Core]

##### 7.11.1.2 General for Intra-band UL CA [NR\_RF\_FR1-Core]

###### 7.11.1.2.1 DC location for Intra-band UL CA [NR\_RF\_FR1-Core]

**R4-2010049 LO location for intra-band UL CA**

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

**Discussion:**

**Decision: Noted.**

**R4-2011472 on FR1 UL CA DC location**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Noted.**

**R4-2011477 CR on FR1 UL contiguous CA DC location**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0470 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011723 (from R4-2011477).**

**R4-2011723 CR on FR1 UL contiguous CA DC location**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0470 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

###### 7.11.1.2.2 UE capability for Intra-band UL CA [NR\_RF\_FR1-Core]

**R4-2010271 Future Proof UE Capability and Specification Applicability for NR UL CA**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution we report the already agreed architecture assumptions and the respective signaling elements proposed for the support of NR contiguous and non-contiguous intra-band UL CA.

**Discussion:**

**Decision: Noted.**

**R4-2011473 on FR1 UL CA UE capability**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Noted.**

##### 7.11.1.3 Intra-band contiguous UL CA for FR1 power class 3 [NR\_RF\_FR1-Core]

**R4-2010228 A-MPR definition for CA\_n48B**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0438 Cat: B (Rel-16)  
  
 Source: Nokia*

**Discussion:**

**Decision: Revised to R4-2011727 (from R4-2010228).**

**R4-2011727 A-MPR definition for CA\_n48B**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0438 Cat: B (Rel-16)  
  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010229 A-MPR simulation results for CA\_n7B**

*Type: discussion For: Discussion  
 Source: Nokia*

**Discussion:**

**Decision: Noted.**

**R4-2011471 CR on FR1 UL Contiguous CA MPR requirement Rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0468 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011728 (from R4-2011471).**

**R4-2011728 CR on FR1 UL Contiguous CA MPR requirement Rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0468 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2011476 CR on FR1 UL contiguous CA requirement correction**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0469 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2011522 Class B and Class C NR CA Back-off Measurements for A-MPR**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Noted.**

**R4-2009622 CR for Pcmax correction for FR1 intraband ULCA**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0412 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Return to.**

**R4-2009630 FR1 PC3 Intra-band Contiguous ULCA AMPR**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Noted.**

**R4-2009588 Correction to FR1 UL contiguous CA MPR regions**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0407 Cat: F (Rel-16)  
  
 Source: Nokia Corporation*

**Discussion:**

**Decision: Revised to R4-2011729 (from R4-2009588).**

**R4-2011729 Correction to FR1 UL contiguous CA MPR regions**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0407 Cat: F (Rel-16)  
  
 Source: Nokia Corporation*

**Discussion:**

**Decision: Return to.**

##### 7.11.1.4 Intra-band non-contiguous UL CA for FR1 power class 3 [NR\_RF\_FR1-Core]

**R4-2011482 CR for intra-band UL non-contiguous CA requirement**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0471 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011725 (from R4-2011482).**

**R4-2011725 CR for intra-band UL non-contiguous CA requirement**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0471 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

###### 7.11.1.4.1 MPR/A-MPR [NR\_RF\_FR1-Core]

**R4-2010301 [FR1ULCA] UE TX measurements and requirements for non-contiguous ULCA**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution we provide our measurements results and proposals to finalize PC3 non-contiguous NR UL CA MPR and A-MPR.

**Discussion:**

**Decision: Noted.**

**R4-2011474 on FR1 UL non-contiguous CA MPR requirement Rel-16**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Noted.**

**R4-2009631 FR1 Intra-band Non-contiguous ULCA MPR**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Noted.**

###### 7.11.1.4.2 Other TX requirements [NR\_RF\_FR1-Core]

**R4-2011512 on FR1 intra-band NC CA Tx requirement**

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

**Discussion:**

**Decision: Noted.**

##### 7.11.1.5 Switching period between case 1 and case 2 [NR\_RF\_FR1-Core]

**R4-2011547           Email discussion summary for [96e][114] NR\_RF\_FR1\_Part\_2**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Discussion:**

.

**Decision: Revised to R4-2011854 (from R4-2011547).**

**R4-2011854           Email discussion summary for [96e][114] NR\_RF\_FR1\_Part\_2**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Discussion:**

.

**Decision: Return to.**

**R4-2011731           WF on remaining issues for Tx switching between two uplink carriers**

*Type: others For: Approval*

*Source: China Telecom*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010018 Views on DL interruption due to UL Tx switching**

*Type: other For: Approval  
 Source: Xiaomi*

**Abstract:**

Proposal 1: the same DL interruption approach shall be used for both EN-DC case and UL CA case.

Proposal 2: the option that introducing UE capability indication for each band combination is preferable.

**Discussion:**

**Decision: Noted.**

**R4-2010105 Applicability of DL interruption for different band combinations**

*Type: discussion For: Discussion  
 Source: CMCC*

**Discussion:**

**Decision: Noted.**

**R4-2010348 Modification of Pcmax for UL CA with uplink Tx switching capability**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0445 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to modify the Pcmax for CA to accommodate power boosting for switched TX

**Discussion:**

**Decision: Revised to R4-2011732 (from R4-2010348).**

**R4-2011732 Modification of Pcmax for UL CA with uplink Tx switching capability**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0445 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to modify the Pcmax for CA to accommodate power boosting for switched TX

**Discussion:**

**Decision: Return to.**

**R4-2010835 Applicability of DL interruption for Tx switching**

*Type: other For: Approval  
 Source: Nokia Japan*

**Abstract:**

This paper discusses applicability of DL interruption for Tx switching.

**Discussion:**

**Decision: Noted.**

**R4-2009578 Applicability of DL interruption due to Tx switching**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Discussion:**

**Decision: Noted.**

##### 7.11.1.6 Time masks for ULSUP-TDM in case of UL timing misalignment [NR\_RF\_FR1-Core]

**R4-2011468 Further discussion on update of ULSUP-TDM time mask requirements**

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

**Abstract:**

In this contribution, we provide our view on the additional period value of X for update of time mask requirement for ULSUP-TDM.

**Discussion:**

**Decision: Noted.**

**R4-2011469 CR to 38.101-3 on time masks for ULSUP in R16**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0467 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

CR for ULSUP time mask requirements.

**Discussion:**

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

**R4-2011500 CR to 38.101-3 on time masks for ULSUP in R16**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0350 Cat: B (Rel-16)  
  
 Source: Huawei Technologies France*

**Discussion:**

**Decision: Revised to R4-2011730 (from R4-2011500).**

**R4-2011730 CR to 38.101-3 on time masks for ULSUP in R16**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0350 Cat: B (Rel-16)  
  
 Source: Huawei Technologies France*

**Discussion:**

**Decision: Return to.**

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

**R4-2010226 TR v0.2.0**

*Type: draft TR For: Agreement  
 38.831 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

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

#### 7.12.1 RF core requirements [NR\_RF\_FR2\_req\_enh-Core]

**R4-2009600 Pcmax defined reporting ranges accuracy issue in 38.133 for FR2**

*Type: other For: Approval  
 Source: InterDigital, Inc.*

**Abstract:**

Pcmax defined reporting ranges accuracy issue in 38.133 for FR2

**Discussion:**

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

##### 7.12.1.1 FR2 MPE [NR\_RF\_FR2\_req\_enh-Core]

**R4-2011548           Email discussion summary for [96e][115] NR\_RF\_FR2\_req\_enh\_Part\_1**

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

**Discussion:**

.

**Decision: Revised to R4-2011855 (from R4-2011548).**

**R4-2011855           Email discussion summary for [96e][115] NR\_RF\_FR2\_req\_enh\_Part\_1**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011734           WF on MPE enhancements**

*Type: others For: Approval*

*Source: OPPO*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010019 Views on P-MPR reporting for FR2 MPE.**

*Type: other For: Approval  
 Source: Xiaomi*

**Abstract:**

Proposal: option A is preferable.

**Discussion:**

**Decision: Noted.**

**R4-2010237 LS on MPE enhancements**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Revised to R4-2011733 (from R4-2010237).**

**R4-2011733 LS on MPE enhancements**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Return to.**

**R4-2010238 UE FR2 MPE enhancements and solutions**

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

**Discussion:**

**Decision: Noted.**

**R4-2010619 Enhancement on FR2 MPE mitigation**

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

**Discussion:**

**Decision: Noted.**

**R4-2010770 Discussion on MPE remaining issues**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

**Decision: Noted.**

**R4-2010854 Discussion on remaining FR2 MPE issues**

*Type: discussion For: Discussion  
 Source: vivo*

**Discussion:**

**Decision: Noted.**

**R4-2011441 P-MPR consideration**

*Type: discussion For: Approval  
 Source: FUTUREWEI*

**Discussion:**

**Decision: Noted.**

**R4-2009555 Remaining issues on P-MPR reporting**

*Type: other For: Discussion  
 Source: Sony, Ericsson*

**Discussion:**

**Decision: Noted.**

**R4-2009597 Options for P-MPR reporting**

*Type: other For: Approval  
 Source: InterDigital, Inc.*

**Abstract:**

Options for P-MPR reporting.

**Discussion:**

**Decision: Noted.**

**R4-2009598 Introduction of the P-MPR 3 bits report mapping in 38.133**

*Type: CR For: Agreement  
 38.133 v16.4.0 CR-0914 Cat: B (Rel-16)  
  
 Source: InterDigital, Inc.*

**Abstract:**

Introduction of the P-MPR 3 bits report mapping in 38.133.

**Discussion:**

**Decision: Revised to R4-2011736 (from R4-2009598).**

**R4-2011736 Introduction of the P-MPR 3 bits report mapping in 38.133**

*Type: CR For: Agreement  
 38.133 v16.4.0 CR-0914 Cat: B (Rel-16)  
  
 Source: InterDigital, Inc.*

**Abstract:**

Introduction of the P-MPR 3 bits report mapping in 38.133.

**Discussion:**

**Decision: Return to.**

**R4-2009599 CR Addressing the P-MPR related updates in 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0216 Cat: B (Rel-16)  
  
 Source: InterDigital, Inc.*

**Abstract:**

CR Addressing the P-MPR related updates in 38.101-2

**Discussion:**

**Decision: Revised to R4-2011735 (from R4-2009599).**

**R4-2011735 CR Addressing the P-MPR related updates in 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0216 Cat: B (Rel-16)  
  
 Source: InterDigital, Inc.*

**Abstract:**

CR Addressing the P-MPR related updates in 38.101-2

**Discussion:**

**Decision: Return to.**

**R4-2009932 Further considerations on the uplink duty cycle enhancements for the MPE scenario**

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

**Discussion:**

**Decision: Noted.**

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

**R4-2011549           Email discussion summary for [96e][116] NR\_RF\_FR2\_req\_enh\_Part\_2**

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

**Discussion:**

.

**Decision: Revised to R4-2011856 (from R4-2011549).**

**R4-2011856           Email discussion summary for [96e][116] NR\_RF\_FR2\_req\_enh\_Part\_2**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011678           WF on FR2 Beam Correspondence**

*Type: others For: Approval*

*Source: Apple*

**Discussion:**

.

**Decision: Approved.**

**R4-2011737           TP to TR38.831: beam correspondence enhancement**

*Type: pCR For: Approval*

*38.831 v0.1.0  
 Source: Apple*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010119** **FR2 Beam Correspondence**

*Type: discussion For: Discussion  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Noted.**

**R4-2010134 Discussion on enhancement of BC in Rel-16 at FR2**

*Type: other For: Approval  
 Source: LG Electronics France*

**Discussion:**

**Decision: Noted.**

**R4-2010198 Discussion on beam correspondence remaining issues**

*Type: discussion For: Discussion  
 Source: Samsung*

**Discussion:**

**Decision: Noted.**

**R4-2010199 CR to TS38.101-2 on beam correspondence enhancement**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0228 Cat: B (Rel-16)  
  
 Source: Samsung*

**Discussion:**

**Decision: Not pursued.**

**R4-2010239 Beam correspondence enhancement**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0231 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Revised to R4-2011738 (from R4-2010239).**

**R4-2011738 Beam correspondence enhancement**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0231 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Return to.**

**R4-2010240 FR2 eBC requirements**

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

**Discussion:**

**Decision: Noted.**

**R4-2010771 Discussion on SSB based BC**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

**Decision: Noted.**

**R4-2011479 On beam correspondence enhancement**

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

**Discussion:**

**Decision: Noted.**

**R4-2009556 Remaining issues in beam correspondence**

*Type: other For: Discussion  
 Source: Sony, Ericsson*

**Discussion:**

**Decision: Noted.**

**R4-2009956 Remaining issues with beam correspondence enhncements**

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

**Discussion:**

**Decision: Noted.**

##### 7.12.1.3 Intra-band non-contiguous DL CA for aggregated BW larger than 1400 MHz [NR\_RF\_FR2\_req\_enh-Core]

**R4-2011550           Email discussion summary for [96e][117] NR\_RF\_FR2\_req\_enh\_Part\_3**

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

**Discussion:**

.

**Decision: Revised to R4-2011857 (from R4-2011550).**

**R4-2011857           Email discussion summary for [96e][117] NR\_RF\_FR2\_req\_enh\_Part\_3**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011741           Draft LS on UE capability for FR2 inter-band CA**

*Type: LS out For: Approval*

*Source: Nokia*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011451 CR to 38.101-2: DL CA BW Enhancement and CA REFSENS**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0250 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

REFSENS relaxation for receive BW wider than 1400 MHz

**Discussion:**

**Decision: Revised to R4-2011740 (from R4-2011451).**

**R4-2011740 CR to 38.101-2: DL CA BW Enhancement and CA REFSENS**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0250 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

REFSENS relaxation for receive BW wider than 1400 MHz

**Discussion:**

**Decision: Return to.**

**R4-2009753 CC allocation in intra-band non-cont. DL CA**

*Type: discussion For: Approval  
 Source: Intel Corporation*

**Discussion:**

**Decision: Noted.**

**R4-2009754 CR to 38.101-2 (Rel-16) intra-band non-cont. DL CA**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0221 Cat: B (Rel-16)  
  
 Source: Intel Corporation*

**Discussion:**

**Decision: Revised to R4-2011739 (from R4-2009754).**

**R4-2011739 CR to 38.101-2 (Rel-16) intra-band non-cont. DL CA**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0221 Cat: B (Rel-16)  
  
 Source: Intel Corporation*

**Discussion:**

**Decision: Return to.**

##### 7.12.1.4 Intra-band non-contiguous UL CA [NR\_RF\_FR2\_req\_enh-Core]

**R4-2011551           Email discussion summary for [96e][118] NR\_RF\_FR2\_req\_enh\_Part\_4**

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

**Discussion:**

.

**Decision: Revised to R4-2011858 (from R4-2011551).**

**R4-2011858           Email discussion summary for [96e][118] NR\_RF\_FR2\_req\_enh\_Part\_4**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011454 CR to 38.101-2: FR2 NC ULCA feature**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0252 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Feature CR

**Discussion:**

**Decision: Revised to R4-2011744 (from R4-2011454).**

**R4-2011744 CR to 38.101-2: FR2 NC ULCA feature**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0252 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Feature CR

**Discussion:**

**Decision: Return to.**

**R4-2011478 On intra-band NC UL CA\_FR2**

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

**Discussion:**

**Decision: Noted.**

**R4-2011511 Discussion on FR2 NC UL CA requirements**

*Type: other For: Agreement  
 Source: Qualcomm India Pvt Ltd*

**Discussion:**

**Decision: Noted.**

##### 7.12.1.5 Inter-band DL CA [NR\_RF\_FR2\_req\_enh-Core]

**R4-2010200 Discussion on FR2 inter-band DL CA**

*Type: discussion For: Discussion  
 Source: Samsung*

**Discussion:**

**Decision: Noted.**

**R4-2010537 Scope and TP of FR2 Inter-band DL CA in Rel-16**

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

**Abstract:**

TP to complete n260+n261 CA is propsoed.

**Discussion:**

**Decision: Revised to R4-2011742 (from R4-2010537).**

**R4-2011742 Scope and TP of FR2 Inter-band DL CA in Rel-16**

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

**Abstract:**

TP to complete n260+n261 CA is propsoed.

**Discussion:**

**Decision: Return to.**

**R4-2010538 Introduction of FR2 inter-band DL CA**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0237 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

CR to complete n260+n261 CA is propsoed.

**Discussion:**

**Decision: Revised to R4-2011743 (from R4-2010538).**

**R4-2011743 Introduction of FR2 inter-band DL CA**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0237 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

CR to complete n260+n261 CA is propsoed.

**Discussion:**

**Decision: Return to.**

**R4-2011390 Inter-band CA UE requirement fragmentation**

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

**Discussion:**

**Decision: Noted.**

**R4-2011420 Inter-band DL CA in FR2: CBM/IBM capability and associated spherical coverage EIS tests**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Discussion:**

**Decision: Noted.**

**R4-2011448 Remaining Details on FR2 Inter-band DL CA**

*Type: discussion For: (not specified)  
 Source: Futurewei Technologies*

**Discussion:**

**Decision: Noted.**

**R4-2011483 On inter band DL CA\_FR2**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Noted.**

**R4-2011510 PSD for FR2 inter-band CA with IBM**

*Type: other For: Approval  
 38.101-2 v..  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Noted.**

**R4-2009557 Inter-band DL CA in FR2: CBM/IBM capability and associated spherical coverage EIS tests**

*Type: other For: Discussion  
 Source: Sony, Ericsson*

**Discussion:**

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

**R4-2009755 FR2 inter-band DL CA**

*Type: discussion For: Approval  
 Source: Intel Corporation*

**Discussion:**

**Decision: Noted.**

**R4-2009963 Beam Management assumptions for inter-band CA**

*Type: discussion For: Approval  
 Source: Apple Inc., Qualcomm Incorporated*

**Discussion:**

**Decision: Noted.**

##### 7.12.1.6 Improvement of UE MPR [NR\_RF\_FR2\_req\_enh-Core]

**R4-2011452 LS on UL power boost mode and IBE relaxation**

*Type: LS out For: Approval  
 to RAN2  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Revised to R4-2011745 (from R4-2011452).**

**R4-2011745 LS on UL power boost mode and IBE relaxation**

*Type: LS out For: Approval  
 to RAN2  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Return to.**

**R4-2011453 CR to 38.101-2: FR2 UE EIRP increase with IBE relaxation**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0251 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.**

##### 7.12.1.7 Multiband relaxation framework enhancement [NR\_RF\_FR2\_req\_enh-Core]

##### 7.12.1.8 FR2 Beam Squint [NR\_RF\_FR2\_req\_enh-Core]

**R4-2011442 Beam squint considerations**

*Type: discussion For: Agreement  
 Source: FUTUREWEI*

**Discussion:**

**Decision: Noted.**

### 7.19 R16 NR maintenance [WI code or TEI16]

#### 7.19.1 UE transient period capability [TEI16]

**R4-2011552           Email discussion summary for [96e][119] NR\_transient\_period**

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

**Discussion:**

.

**Decision: Revised to R4-2011859 (from R4-2011552).**

**R4-2011859           Email discussion summary for [96e][119] NR\_transient\_period**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2010914 Draft CR on introduction of shorter Transient Period Capability**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 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 R4-2011766 (from R4-2010914).**

**R4-2011766 Draft CR on introduction of shorter Transient Period Capability**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 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.**

**R4-2010915 Short Transient Period Testing**

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

**Discussion:**

**Decision: Noted.**

**R4-2010916 Draft LS on shorter transient period capability**

*Type: LS out For: Approval  
 to RAN2  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Revised to R4-2011767 (from R4-2010916).**

**R4-2011767 Draft LS on shorter transient period capability**

*Type: LS out For: Approval  
 to RAN2  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Return to.**

**R4-2011475 On transient period UE capability**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Noted.**

**R4-2011523 Transient Period Capability for NR FR1**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Noted.**

#### 7.19.2 Transmit diversity and power class related to UL MIMO [TEI16]

**R4-2011553           Email discussion summary for [96e][120] NR\_TxD**

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

**Discussion:**

.

**Decision: Revised to R4-2011860 (from R4-2011553).**

**R4-2011860           Email discussion summary for [96e][120] NR\_TxD**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011768           WF on Rel-16 TxD**

*Type: others For: Approval*

*Source: Samsung*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010599 Draft Reply LS to RAN5 on ambiguity in output power requirements for power class 2 UE for EN-DC**

*Type: LS out For: Approval  
 to RAN5  
 Source: Ericsson*

**Abstract:**

Discussion on signaling ambiguity and proposed draft reply to RAN5

**Discussion:**

**Decision: Noted.**

##### 7.19.2.1 R16 support of transmit diversity [TEI16]

**R4-2010017 Discussion on Tx diversity open issues**

*Type: other For: Approval  
 Source: Xiaomi*

**Discussion:**

**Decision: Noted.**

**R4-2010094 Discussion on the Support of Transparent Tx Diversity in Rel-16**

*Type: discussion For: Discussion  
 Source: Samsung*

**Discussion:**

**Decision: Noted.**

**R4-2010095 Draft Reply LS to GCF on Requirement in Power Class 2 for UL MIMO Test Cases**

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

**Discussion:**

**Decision: Noted.**

**R4-2010303 Clarification on 2Tx requirements specified at sum of emissions from antenna connecters**

*Type: other For: Approval  
 38.101-1 v..  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Noted.**

**R4-2010766 CR on clarification of NR requirements under EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0338 Cat: F (Rel-16)  
  
 Source: OPPO*

**Discussion:**

**Decision: Not pursued.**

**R4-2010767 Draft LS on NR power class clarification**

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

**Discussion:**

**Decision: Noted.**

**R4-2010768 Discussion on Rel-16 TxD**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

**Decision: Noted.**

**R4-2010803 Discussion on open issues for Tx diversity requirements**

*Type: discussion For: Approval  
 Source: Rohde & Schwarz*

**Discussion:**

**Decision: Noted.**

**R4-2010806 On Tx diversity requirements**

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

**Discussion:**

**Decision: Noted.**

**R4-2010807 draft CR for TS 38.101-1 Tx diversity requirements**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon, OPPO*

**Discussion:**

**Decision: Revised to R4-2011769 (from R4-2010807).**

**R4-2011769 draft CR for TS 38.101-1 Tx diversity requirements**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon, OPPO*

**Discussion:**

**Decision: Return to.**

**R4-2011459 TxD for 29dBm PC1.5**

*Type: discussion For: Approval  
 Source: T-Mobile USA Inc.*

**Abstract:**

Discussed options for treatment of TxD for PC1.5.

**Discussion:**

**Decision: Noted.**

**R4-2011519 Further Considerations on the EVM Definition for Antenna Ports Including Transparent Transmit Diversity**

*Type: discussion For: Approval  
 Source: Lenovo, Motorola Mobility*

**Discussion:**

**Decision: Noted.**

**R4-2009756 On transparent transmit diversity**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Discussion:**

**Decision: Noted.**

**R4-2009941 On transparent TxD**

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

**Discussion:**

**Decision: Noted.**

#### 7.19.3 Other UE RF [WI code or TEI16]

**R4-2011554           Email discussion summary for [96e][121] NR\_R16\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Dish Network)*

**Discussion:**

.

**Decision: Revised to R4-2011861 (from R4-2011554).**

**R4-2011861           Email discussion summary for [96e][121] NR\_R16\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Dish Network)*

**Discussion:**

.

**Decision: Return to.**

**R4-2011777           WF on handling new channel BW’s for EN-DC and NR CA band combinations with MSD**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011781           Draft CR to TS 38.307 on NR-DC release-independent**

*Type: draftCR For: Endorsement  
 38.307 v16.3.0*

*Source: ZTE*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010048 CR for TS 38.101-2: Correction on n259 ACS test parameters for Case 1**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0227 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Not pursued.**

**R4-2010121 Corrections of Japan-related CA co-ex tables for REL-16 combo**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0436 Cat: F (Rel-16)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for REL-16 Japan related CA protections for 38.101-1

**Discussion:**

**Decision: Not pursued.**

**R4-2010125 Corrections of Japan-related EN-DC co-ex tables for REL-16 combo**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0327 Cat: F (Rel-16)  
  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

Corrections for REL-16 Japan related CA protections for 38.101-3.

**Discussion:**

**Decision: Not pursued.**

**R4-2010230 Restoring the clause structure of NR FR1 uplink contiguous intraband CA**

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

**Discussion:**

**Decision: Approved.**

**R4-2010231 CR Restoring the clause structure of NR FR1 uplink contiguous intraband CA**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0439 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Qualcomm Inc, Skyworks, Ericsson*

**Discussion:**

**Decision: Revised to R4-2011772 (from R4-2010231).**

**R4-2011772 CR Restoring the clause structure of NR FR1 uplink contiguous intraband CA**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0439 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Qualcomm Inc, Skyworks, Ericsson*

**Discussion:**

**Decision: Return to.**

**R4-2010321 CR to TS 38.101-2 on corrections to intra-band contiguous CA configurations (Rel-16)**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0232 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-2 on corrections to intra-band contiguous CA configurations (Rel-16)

**Discussion:**

**Decision: Not pursued.**

**R4-2010519 Correction of n259 requirement**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0235 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

fix CR implementation error

**Discussion:**

**Decision: Agreed.**

**R4-2010587 MSD correction for new added CBW**

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

**Discussion:**

**Decision: Revised to R4-2011779 (from R4-2010587).**

**R4-2011779 MSD correction for new added CBW**

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

**Discussion:**

**Decision: Return to.**

**R4-2010625 CR to TS38.101-1: Correction on the general requirement and configured transmitted power requirement for inter-band DC**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0448 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Not pursued.**

**R4-2010633 CR to TS 38.307 on NR-DC release-independent**

*Type: CR For: Agreement  
 38.307 v16.3.0 CR-0029 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Not pursued.**

**R4-2010639 CR to TS 38.101-3: Clean up the MSD test point for ENDC(three band)**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0335 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Agreed.**

**R4-2010808 Discussion and draft reply LS On EN-DC power class**

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

**Discussion:**

**Decision: Noted.**

**R4-2010809 draft CR for TS 38.101-3: introduce new power class for EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011770 (from R4-2010809).**

**R4-2011770 draft CR for TS 38.101-3: introduce new power class for EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010851 Further discussion on power class fall back optimization**

*Type: discussion For: Discussion  
 Source: vivo*

**Discussion:**

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

**R4-2010855 Correction of delta Powerclass for Inter-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0344 Cat: F (Rel-16)  
  
 Source: vivo, CMCC, China Unicom*

**Discussion:**

**Decision: Not pursued.**

**R4-2010923 CR for 38.101-1 to remove PHS system protection for NR CA band combination with band n1 (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0459 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011773 (from R4-2010923).**

**R4-2011773 CR for 38.101-1 to remove PHS system protection for NR CA band combination with band n1 (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0459 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010924 CR for 38.101-3 to remove PHS system, 860~890 and 1400~1427 protection for EN-DC band combination with band n1, n8 and n50 (Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0347 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011780 (from R4-2010924).**

**R4-2011780 CR for 38.101-3 to remove PHS system, 860~890 and 1400~1427 protection for EN-DC band combination with band n1, n8 and n50 (Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0347 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010925 CR for 38.101-1 to add the missing region for NS\_18 and maintenance the ?mprc (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0460 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011774 (from R4-2010925).**

**R4-2011774 CR for 38.101-1 to add the missing region for NS\_18 and maintenance the ?mprc (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0460 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2011184 Further discussion on power class fall back optimization**

*Type: discussion For: Discussion  
 Source: vivo*

**Discussion:**

**Decision: Noted.**

**R4-2011339 Discussion on release independent update for the Rel.16 EN-DC and NR CA/DC combinations from the basket**

*Type: discussion For: (not specified)  
 Source: CHTTL*

**Abstract:**

In section 4, we provide the draft CR for TS 38.307 to update the Rel.16 combinations to be release independent from rel.15 according to the latest Rel.16 specifications. We propose to check those changes in section 4 before going directly to the CR if po

**Discussion:**

**Decision: Noted.**

**R4-2011489 on power class fallback enhancement**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Noted.**

**R4-2011490 CR for 38.101-3 on inter-band ENDC Pcmax**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0349 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Agreed.**

**R4-2011515 CR to 38.101-3 - Correction to cross band isolation MSD tables and DC\_42\_n79**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0351 Cat: F (Rel-16)  
  
 Source: Skyworks Solutions Inc., Mediatek*

**Abstract:**

MSD for new channel bandwidth (CBW) are missing. 70MHz CBW is missing

Alignment of MSD values with NR\_CA MSD due to cross band isolation

Re-ordering of UL configuration table to align with MSD combination order.

Wether DC\_42\_n79 supports simultaneous Tx/R

**Discussion:**

**Decision: Revised to R4-2011778 (from R4-2011515).**

**R4-2011778 CR to 38.101-3 - Correction to cross band isolation MSD tables and DC\_42\_n79**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0351 Cat: F (Rel-16)  
  
 Source: Skyworks Solutions Inc., Mediatek*

**Abstract:**

MSD for new channel bandwidth (CBW) are missing. 70MHz CBW is missing

Alignment of MSD values with NR\_CA MSD due to cross band isolation

Re-ordering of UL configuration table to align with MSD combination order.

Wether DC\_42\_n79 supports simultaneous Tx/R

**Discussion:**

**Decision: Return to.**

**R4-2011528 CR to 38.101-1 - Correction to CA BCS and cross band isolation MSD tables**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0480 Cat: F (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Revised to R4-2011775 (from R4-2011528).**

**R4-2011775 CR to 38.101-1 - Correction to CA BCS and cross band isolation MSD tables**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0480 Cat: F (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Return to.**

**R4-2011529 CR to 38.101-1 Correction to NS\_18**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0481 Cat: F (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Discussion:**

**Decision: Not pursued.**

**R4-2009615 n26 256QAM AMPR**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0409 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Agreed.**

**R4-2009618 CR for missing note for DC\_39A\_n41A for non-simultaneous RX/TX operation**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0300 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Agreed.**

**R4-2009619 CR for correcting DC\_48\_n5 UE spurious coexistence in 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0301 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Agreed.**

**R4-2009620 CR for missing DC\_3A\_n1A Cross Band Noise MSD for large NR UL BW in 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0302 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Not pursued.**

**R4-2009621 CR for missing IMD MSD in 38.101-3 for DC\_3A-28A\_n41A, DC\_28A-41A\_n77A**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0303 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Agreed.**

**R4-2009628 ENDC crossband noise impact with large NR BW**

*Type: other For: Approval  
 38.101-3 v..  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Noted.**

**R4-2009666 Correction to ASEM for NS\_27**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0416 Cat: F (Rel-16)  
  
 Source: Anritsu Corporation*

**Abstract:**

1) Note in Table 6.5.2.3.8-1 is missing from Ver 16.3.0.

2) Definition of ?fOOB is an offset from the channel edge.

Therefore the expression “3540 MHz < ?fOOB < 3710 MHz” is misleading

**Discussion:**

**Decision: Revised to R4-2011771 (from R4-2009666).**

**R4-2011771 Correction to ASEM for NS\_27**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0416 Cat: F (Rel-16)  
  
 Source: Anritsu Corporation*

**Abstract:**

1) Note in Table 6.5.2.3.8-1 is missing from Ver 16.3.0.

2) Definition of ?fOOB is an offset from the channel edge.

Therefore the expression “3540 MHz < ?fOOB < 3710 MHz” is misleading

**Discussion:**

**Decision: Return to.**

**R4-2009718 Introduction of UE PC2 for NR band n40**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0419 Cat: F (Rel-16)  
  
 Source: Reliance Jio*

**Discussion:**

**Decision: Not pursued.**

**R4-2009939 Coexistence cleanup for 38101-1 Rel16**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0423 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Agreed.**

**R4-2009940 Coexistence cleanup for 38101-3 Rel16**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0313 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Agreed.**

**R4-2009947 CR Editorial cleanup of band combination tables for 38101-1 Rel16**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0424 Cat: D (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Agreed.**

**R4-2009948 CR Editorial cleanup of band combination tables for 38101-3 Rel16**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0314 Cat: D (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Not pursued.**

**R4-2009949 Correction for REL16 FR2 contiguous intra-band CA configuration table**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0226 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Revised to R4-2011776 (from R4-2009949).**

**R4-2011776 Correction for REL16 FR2 contiguous intra-band CA configuration table**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0226 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Return to.**

**R4-2009976 CR to correct protected band of intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0319 Cat: A (Rel-16)  
  
 Source: KDDI Corporation*

**Discussion:**

**Decision: Postponed.**

## 8 Rel-16 UE feature list

**R4-2011555           Email discussion summary for [96e][122] R16\_UE\_ feature**

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

**Discussion:**

.

**Decision: Revised to R4-2011862 (from R4-2011555).**

**R4-2011862           Email discussion summary for [96e][122] R16\_UE\_ feature**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011679           LS on Rel-16 RAN4 UE features lists for NR and LTE**

*Type: LS out For: Approval*

*Source: CMCC*

**Discussion:**

.

**Decision: Approved.**

**R4-2011680           RAN4 UE features list for Rel-16**

*Type: discussion For: Approval*

*Source: CMCC*

**Discussion:**

.

**Decision: Approved.**

**R4-2010050 On Rel-16 UE feature list**

*Type: discussion For: Discussion  
 38.133 v..  
 Source: Apple*

**Discussion:**

**Decision: Noted.**

**R4-2010063 PC 1.5 in RAN4 UE features list for Rel-16**

*Type: discussion For: Approval  
 Source: T-Mobile USA*

**Discussion:**

**Decision: Noted.**

**R4-2011467 Discussion on Rel-16 feature list**

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

**Abstract:**

In this paper, we share our view on the feature list for Rel-16.

**Discussion:**

**Decision: Noted.**

**R4-2009759 Views on Rel-16 UE feature list**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Discussion:**

**Decision: Noted.**

## 9 Rel-16 spectrum related Work Items for NR

### 9.1 29dBm UE Power Class for B41 and n41 [LTE\_NR\_B41\_Bn41\_PC29dBm]

#### 9.1.1 General [LTE\_NR\_B41\_Bn41\_PC29dBm]

**R4-2011556           Email discussion summary for [96e][123] LTE\_NR\_B41\_Bn41\_PC29dBm**

*Type: other For: Information  
 Source: Moderator (T-Mobile USA)*

**Discussion:**

.

**Decision: Revised to R4-2011863 (from R4-2011556).**

9 **R4-2011863           Email discussion summary for [96e][123] LTE\_NR\_B41\_Bn41\_PC29dBm**

*Type: other For: Information  
 Source: Moderator (T-Mobile USA)*

**Discussion:**

.

**Decision: Return to.**

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

**R4-2010060 CR for 38.101-1: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0432 Cat: B (Rel-16)  
  
 Source: T-Mobile USA*

**Discussion:**

**Decision: Revised to R4-2011783 (from R4-2010060).**

**R4-2011783 CR for 38.101-1: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0432 Cat: B (Rel-16)  
  
 Source: T-Mobile USA*

**Discussion:**

**Decision: Return to.**

**R4-2010061 CR for 38.307: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 38.307 v16.3.0 CR-0028 Cat: B (Rel-16)  
  
 Source: T-Mobile USA*

**Discussion:**

Chair: the CR is agreeable based on first round discussion. Decision deferred to agree all CRs in a package

**Decision: Return to.**

**R4-2011449 MPR and NS\_04 A-MPR for 29 dBm PC1.5**

*Type: discussion For: Approval  
 Source: T-Mobile USA Inc., Qorvo*

**Abstract:**

Proposal for MPR and NS\_04 A-MPR for PC1.5

**Discussion:**

**Decision: Revised to R4-2011782 (from R4-2011449).**

**R4-2011782 MPR and NS\_04 A-MPR for 29 dBm PC1.5**

*Type: discussion For: Approval  
 Source: T-Mobile USA Inc., Qorvo*

**Abstract:**

Proposal for MPR and NS\_04 A-MPR for PC1.5

**Discussion:**

**Decision: Return to.**

**R4-2009943 PC1.5 UL MIMO MPR**

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

**Discussion:**

**Decision: Noted.**

#### 9.1.3 Others [LTE\_NR\_B41\_Bn41\_PC29dBm]

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

#### 9.2.1 General [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**R4-2011557           Email discussion summary for [96e][124] ENDC\_UE\_PC2\_FDD\_TDD**

*Type: other For: Information  
 Source: Moderator (China Unicom)*

**Discussion:**

.

**Decision: Revised to R4-2011864 (from R4-2011557).**

**R4-2011864           Email discussion summary for [96e][124] ENDC\_UE\_PC2\_FDD\_TDD**

*Type: other For: Information  
 Source: Moderator (China Unicom)*

**Discussion:**

.

**Decision: Return to.**

**R4-2011784           WF on EN-DC FDD+TDD PC2 HPUE**

*Type: others For: Approval*

*Source: China Unicom*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011787           LS on UE capability for PC2 inter-band EN-DC (LTE FDD+NR TDD)**

*Type: LS out For: Approval*

*Source: China Unicom*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010016 Discussion on the remain issues for NSA high power UE**

*Type: other For: Approval  
 Source: Xiaomi*

**Discussion:**

**Decision: Noted.**

**R4-2010088 CR to TS 38.101-3: PC2 band 3+band n78 ENDC**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0324 Cat: B (Rel-16)  
  
 Source: China Unicom*

**Discussion:**

**Decision: Revised to R4-2011785 (from R4-2010088).**

**R4-2011785 CR to TS 38.101-3: PC2 band 3+band n78 ENDC**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0324 Cat: B (Rel-16)  
  
 Source: China Unicom*

**Discussion:**

**Decision: Return to.**

**R4-2010295 Rel-16 Power Class 2 for EN-DC FDD+TDD UE**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Noted.**

**R4-2010349 Feasibility of reporting: expected UE behaviour with duty-cycle reporting and PMPR method?**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution concerns feasility of duty-cycle capability reporting from BS and UE perspectives. We make a proposal for completing the work item.

**Discussion:**

**Decision: Noted.**

**R4-2010816 On FDD\_TDD EN-DC HPUE**

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

**Discussion:**

**Decision: Noted.**

**R4-2009719 Discussion on completion of EN-DC PC2 FDD+TDD HPUE & Draft LS out**

*Type: LS out For: Approval  
 to RAN2  
 Source: China Unicom*

**Discussion:**

**Decision: Noted.**

#### 9.2.2 UE RF requirement [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**R4-2010350 Completing the WI including the "blind scheme" that is not blind**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose to use both the PMPR method and the "blind scheme" as baseline (default).

**Discussion:**

**Decision: Noted.**

**R4-2010351 Introduction of EN-DC power class 2 for FDD-TDD band combinations**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0331 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce requirements for EN-DC power class 2 for FDD-TDD band combinations

**Discussion:**

**Decision: Revised to R4-2011786 (from R4-2010351).**

**R4-2011786 Introduction of EN-DC power class 2 for FDD-TDD band combinations**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0331 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce requirements for EN-DC power class 2 for FDD-TDD band combinations

**Discussion:**

**Decision: Return to.**

**R4-2010632 CR to TS 38.101-3: PC2 band 3+band n41 ENDC**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0334 Cat: B (Rel-16)  
  
 Source: ZTE Corporation, CMCC, Xiaomi*

**Discussion:**

**Decision: Revised to R4-2011788 (from R4-2010632).**

**R4-2011788 CR to TS 38.101-3: PC2 band 3+band n41 ENDC**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0334 Cat: B (Rel-16)  
  
 Source: ZTE Corporation, CMCC, Xiaomi*

**Discussion:**

**Decision: Return to.**

**R4-2010848 Discussion on EN-DC (FDD+TDD) HPUE fall back schemes**

*Type: discussion For: Discussion  
 Source: vivo*

**Discussion:**

**Decision: Noted.**

**R4-2010849 CR for adding SAR solutions for FDD+TDD EN-DC PC2 UE**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0343 Cat: B (Rel-16)  
  
 Source: vivo*

**Discussion:**

**Decision: Not pursued.**

**R4-2009952 Applicability of P-MPR to EN-DC PC2**

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

**Discussion:**

**Decision: Noted.**

**R4-2010299 PC2 for the P-MPR solution: DC\_2\_n77, 5\_n77, 13\_n77 and 66\_n77 for TP for 38.717-11-11**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Noted.**

#### 9.2.3 Signaling [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**R4-2010308 Discussion on completion of FDD-TDD EN-DC High Power UE**

*Type: discussion For: Approval  
 Source: CHTTL*

**Discussion:**

**Decision: Noted.**

**R4-2010769 Discussion on FDD+TDD HPUE SAR solutions**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

**Decision: Noted.**

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

#### 9.3.1 General [NR\_n48\_LTE\_48\_coex-Core]

**R4-2011558           Email discussion summary for [96e][125] NR\_n48\_LTE\_48\_coex**

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

**Discussion:**

.

**Decision: Revised to R4-2011865 (from R4-2011558).**

**R4-2011865           Email discussion summary for [96e][125] NR\_n48\_LTE\_48\_coex**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011746           LS on clarification for the UE behavior when UL shift is optional**

*Type: LS out For: Approval*

*Source: Apple*

**Discussion:**

.

**Decision:                    Return to.**

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

**R4-2010532 Views on band 48/n48 spectrum sharing**

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

**Abstract:**

no raster change is required. new band is not recommended.

**Discussion:**

**Decision: Noted.**

**R4-2010778 Views on DSS in band 48/n48**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

**Decision: Noted.**

**R4-2010936 LTE/NR spectrum sharing in band 48/n48**

*Type: other For: Approval  
 Source: Ericsson GmbH, Eurolab*

**Discussion:**

**Decision: Noted.**

**R4-2011422 Views on n48 DSS**

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

**Discussion:**

**Decision: Noted.**

**R4-2009935 LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: discussion For: Decision  
 Source: Apple Inc., Comcast*

**Discussion:**

**Decision: Revised to R4-2011532 (from R4-2009935).**

**R4-2011532 LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: discussion For: Decision  
 Source: Apple Inc., Comcast*

**Discussion:**

**Decision: Noted.**

**R4-2009936 Introduction of LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0422 Cat: B (Rel-16)  
  
 Source: Apple Inc., Comcast*

**Discussion:**

**Decision: Return to.**

**R4-2009937 Introduction of LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: CR For: Agreement  
 38.104 v16.4.0 CR-0220 Cat: B (Rel-16)  
  
 Source: Apple Inc., Comcast*

**Discussion:**

**Decision: Return to.**

## 10 Rel-17 spectrum related Work Items for NR

**R4-2010300 Release 17 FR2 bandwidth class**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Noted.**

### 10.1 NR intra band Carrier Aggregation for xCC DL/yCC UL including contiguous and non-contiguous spectrum (x>=y) [NR\_CA\_R17\_intra]

**R4-2011559           Email discussion summary for [96e][126] NR\_Baskets\_Part\_1**

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

**Discussion:**

.

**Decision:                    Return to**

#### 10.1.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R17\_intra-Core /Perf]

**R4-2010672 Revised WID NR Intra-band Rel-17**

*Type: WID revised For: Information  
 Source: Ericsson*

**Abstract:**

Revised WID NR Intra-band Rel-17

**Discussion:**

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

**R4-2010675 CR introduction completed band combinations 38.717-01-01 -> 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0451 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.717-01-01 -> 38.101-1

**Discussion:**

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

**R4-2010676 CR introduction completed band combinations 38.717-01-01 -> 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v16.4.0 CR-0244 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.717-01-01 -> 38.101-2

**Discussion:**

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

**R4-2010680 TR skeleton 38.717-01-01 v0.0.1 Rel-17 NR Intra-band**

*Type: draft TR For: Agreement  
 38.717-01-01 v0.0.1  
 Source: Ericsson*

**Abstract:**

TR skeleton 38.717-01-01 v0.0.1 Rel-17 NR Intra-band

**Discussion:**

**Decision: Agreed.**

#### 10.1.2 UE RF for FR1 [NR\_CA\_R17\_intra-Core]

**R4-2010286 Draft CR to 38.101-1: Introduce n48 intra-band CA configuration**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011597 (from R4-2010286).**

**R4-2011597 Draft CR to 38.101-1: Introduce n48 intra-band CA configuration**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010684 TP to TR 38.717-01-01 to include CA\_n71(2A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to TR 38.717-01-01 to include CA\_n71(2A)

**Discussion:**

**Decision: Revised to R4-2011619 (from R4-2010684).**

**R4-2011619 TP to TR 38.717-01-01 to include CA\_n71(2A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to TR 38.717-01-01 to include CA\_n71(2A)

**Discussion:**

**Decision: Return to.**

**R4-2010903 DraftCR for 38.101-1 to add BCS1 for CA\_n66(2A)**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011625 (from R4-2010903).**

**R4-2011625 DraftCR for 38.101-1 to add BCS1 for CA\_n66(2A)**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2009977 TP for TR 38.717-01-01: CA\_3DL\_n77(3A)\_1UL\_n77A**

*Type: pCR For: Approval  
 38.717-01-01 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011591 (from R4-2009977).**

**R4-2011591 TP for TR 38.717-01-01: CA\_3DL\_n77(3A)\_1UL\_n77A**

*Type: pCR For: Approval  
 38.717-01-01 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

#### 10.1.3 UE RF for FR2 [NR\_CA\_R17\_intra-Core]

**R4-2010294 Draft CR to 38.101-2: Introduce mmWave intra-band CA configurations**

*Type: draftCR For: Endorsement  
 38.101-2 v16.4.0  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011598 (from R4-2010294).**

**R4-2011598 Draft CR to 38.101-2: Introduce mmWave intra-band CA configurations**

*Type: draftCR For: Endorsement  
 38.101-2 v16.4.0  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

### 10.2 NR inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1, 2) [NR\_CADC\_R17\_2BDL\_xBUL]

**R4-2011560           Email discussion summary for [96e][127] NR\_Baskets\_Part\_2**

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

**Discussion:**

.

**Decision:                    Return to**

#### 10.2.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_2BDL\_xBUL-Core/Perf]

**R4-2010650 Revised WID on Rel-17 NR Inter-band CA\_DC xUL\_2DL (x=1,2)**

*Type: WID revised For: Information  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010651 Draft CR to reflect the completed NR inter band CA DC combinations for 2 bands DL with up to 2 bands UL into TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010652 Draft CR to reflect the completed NR inter band CA DC combinations for 2 bands DL with up to 2 bands UL into TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010790 TR 38.717-02-01 v0.0.1**

*Type: draft TR For: Agreement  
 38.717-02-01 v0.0.1  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

**Decision: Revised to R4-2011626 (from R4-2010790).**

**R4-2011626 TR 38.717-02-01 v0.0.1**

*Type: draft TR For: Agreement  
 38.717-02-01 v0.0.1  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

**Decision: Return to.**

**R4-2010792 TR 38.717-02-01 v0.1.0**

*Type: draft TR For: Agreement  
 38.717-02-01 v0.1.0  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

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

#### 10.2.2 NR inter band CA without any FR2 band(s) [NR\_CADC\_R17\_2BDL\_xBUL-Core]

**R4-2010006 Draft CR for TS 38.101-1: Support of DC\_n3-n77 and DC\_n28\_n77**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011627 (from R4-2010006).**

**R4-2011627 Draft CR for TS 38.101-1: Support of DC\_n3-n77 and DC\_n28\_n77**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

**R4-2010248 TP for TR 38.717-02-01 CA\_n3-n77(2A) \_UL\_n77(2A)**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Revised to R4-2011628 (from R4-2010248).**

**R4-2011628 TP for TR 38.717-02-01 CA\_n3-n77(2A) \_UL\_n77(2A)**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Return to.**

**R4-2010249 TP for TR 38.717-02-01 CA\_n3-n78(2A) \_UL\_n78(2A)**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Revised to R4-2011629 (from R4-2010249).**

**R4-2011629 TP for TR 38.717-02-01 CA\_n3-n78(2A) \_UL\_n78(2A)**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Return to.**

**R4-2010250 TP for TR 38.717-02-01 CA\_n28-n77(2A) \_UL\_n77(2A)**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Revised to R4-2011630 (from R4-2010250).**

**R4-2011630 TP for TR 38.717-02-01 CA\_n28-n77(2A) \_UL\_n77(2A)**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Return to.**

**R4-2010251 TP for TR 38.717-02-01 CA\_n28-n78(2A) \_UL\_n78(2A)**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Revised to R4-2011631 (from R4-2010251).**

**R4-2011631 TP for TR 38.717-02-01 CA\_n28-n78(2A) \_UL\_n78(2A)**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Return to.**

**R4-2010272 Draft CR to 38.101-1: Introduce CA\_n2-n48, CA\_n2-n77, CA\_n5-n77, CA\_n66-n77 CA configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011632 (from R4-2010272).**

**R4-2011632 Draft CR to 38.101-1: Introduce CA\_n2-n48, CA\_n2-n77, CA\_n5-n77, CA\_n66-n77 CA configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010297 The P-MPR based solution for CA\_n2-n77, CA\_n5-n77, CA\_n66-n77 for TP for 38.717-02-01**

*Type: discussion For: Approval  
 38.717-02-01 v..  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Noted.**

**R4-2010329 TP for 38.717-02-01: CA\_n66-n77 and DC\_n66-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011633 (from R4-2010329).**

**R4-2011633 TP for 38.717-02-01: CA\_n66-n77 and DC\_n66-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010339 TP for 38.717-02-01: CA\_n5-n77 and DC\_n5-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011634 (from R4-2010339).**

**R4-2011634 TP for 38.717-02-01: CA\_n5-n77 and DC\_n5-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010353 TP for 38.717-02-01: CA\_n2-n77 and DC\_n2-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011635 (from R4-2010353).**

**R4-2011635 TP for 38.717-02-01: CA\_n2-n77 and DC\_n2-n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010354 TP for 38.717-02-01: CA\_n2-n48 and DC\_n2-n48**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011636 (from R4-2010354).**

**R4-2011636 TP for 38.717-02-01: CA\_n2-n48 and DC\_n2-n48**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010506 TP for TR 38.717-02-01: CA\_n5-n25**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Revised to R4-2011637 (from R4-2010506).**

**R4-2011637 TP for TR 38.717-02-01: CA\_n5-n25**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Return to.**

**R4-2010507 Draft CR for 38.101-1: CA\_n5-n66**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Endorsed.**

**R4-2010508 Draft CR for 38.101-1: CA\_n5-n78**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Endorsed.**

**R4-2010509 TP for TR 38.717-02-01: CA\_n71-n78**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Revised to R4-2011638 (from R4-2010509).**

**R4-2011638 TP for TR 38.717-02-01: CA\_n71-n78**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Return to.**

**R4-2010526 TP to TR 38.717-02-01: CA\_n7-n66**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.0  
 Source: Nokia, Bell Mobility*

**Discussion:**

**Decision: Revised to R4-2011639 (from R4-2010526).**

**R4-2011639 TP to TR 38.717-02-01: CA\_n7-n66**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.0  
 Source: Nokia, Bell Mobility*

**Discussion:**

**Decision: Return to.**

**R4-2010527 TP to TR 38.717-02-00: CA\_n25-n38**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.0  
 Source: Nokia, Bell Mobility*

**Discussion:**

**Decision: Revised to R4-2011640 (from R4-2010527).**

**R4-2011640 TP to TR 38.717-02-00: CA\_n25-n38**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.0  
 Source: Nokia, Bell Mobility*

**Discussion:**

**Decision: Return to.**

**R4-2010539 TP for CA 2DL2UL n1-n77 for TR 38.717-02-01**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Revised to R4-2011641 (from R4-2010539).**

**R4-2011641 TP for CA 2DL2UL n1-n77 for TR 38.717-02-01**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010560 TP for CA 2DL2UL n77-n79 for TR 38.717-02-01**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Revised to R4-2011642 (from R4-2010560).**

**R4-2011642 TP for CA 2DL2UL n77-n79 for TR 38.717-02-01**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010574 TP for CA 2DL2UL n78-n79 for TR 38.717-02-01**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Revised to R4-2011643 (from R4-2010574).**

**R4-2011643 TP for CA 2DL2UL n78-n79 for TR 38.717-02-01**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010637 Draft CR to TS38.101-1: CA\_n28A-n41A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: ZTE Corporation, CMCC*

**Discussion:**

**Decision: Endorsed.**

**R4-2010638 Draft CR to TS38.101-1: CA\_n40A-n41C**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: ZTE Corporation, CMCC*

**Discussion:**

**Decision: Endorsed.**

**R4-2010683 draft CR to 38.101-1 to add new configuration and BCSs**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson*

**Abstract:**

draft CR to 38.101-1 to add new configuration and BCSs

**Discussion:**

**Decision: Revised to R4-2011644 (from R4-2010683).**

**R4-2011644 draft CR to 38.101-1 to add new configuration and BCSs**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson*

**Abstract:**

draft CR to 38.101-1 to add new configuration and BCSs

**Discussion:**

**Decision: Return to.**

**R4-2010685 draft CR 38.101-1 to add CA\_n25A-n71(2A), CA\_n41A-n71(2A), CA\_n66A-n71(2A)**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-1 to add CA\_n25A-n71(2A), CA\_n41A-n71(2A), CA\_n66A-n71(2A)

**Discussion:**

**Decision: Endorsed.**

**R4-2010686 TP for TR 38.717-02-00 to include CA\_n25A-n48A, CA\_n25A-n48(2A), CA\_n25A-n48C**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 38.717-02-00 to include CA\_n25A-n48A, CA\_n25A-n48(2A), CA\_n25A-n48C

**Discussion:**

**Decision: Revised to R4-2011645 (from R4-2010686).**

**R4-2011645 TP for TR 38.717-02-00 to include CA\_n25A-n48A, CA\_n25A-n48(2A), CA\_n25A-n48C**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 38.717-02-00 to include CA\_n25A-n48A, CA\_n25A-n48(2A), CA\_n25A-n48C

**Discussion:**

**Decision: Return to.**

**R4-2010901 DraftCR for 38.101-1 to add BCS1 for CA\_n28A-n78A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon,CBN*

**Discussion:**

**Decision: Endorsed.**

**R4-2010902 TP for TR 38.717-02-01: CA\_n28A-n79A**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Huawei, HiSilicon,CBN*

**Discussion:**

**Decision: Revised to R4-2011646 (from R4-2010902).**

**R4-2011646 TP for TR 38.717-02-01: CA\_n28A-n79A**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Huawei, HiSilicon,CBN*

**Discussion:**

**Decision: Return to.**

**R4-2009720 Draft CR on introducing CA\_n1A-n78A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: China Unicom*

**Discussion:**

**Decision: Endorsed.**

#### 10.2.3 NR inter band CA with at least one FR2 band [NR\_CADC\_R17\_2BDL\_xBUL-Core]

**R4-2010275 Draft CR to 38.101-3: Introduce CA configurations for CA\_n5-n260, n5-n261, n66-n260, n66-n261 n77-n261**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011647 (from R4-2010275).**

**R4-2011647 Draft CR to 38.101-3: Introduce CA configurations for CA\_n5-n260, n5-n261, n66-n260, n66-n261 n77-n261**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010355 draft CR for CA\_n1-n257D/E/F and CA\_n1-n257J/K/L/M**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: CHTTL*

**Discussion:**

**Decision: Endorsed.**

**R4-2010356 TP for TR 38.717-02-01: CA\_n77-n260 and DC\_n77-n260**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011648 (from R4-2010356).**

**R4-2011648 TP for TR 38.717-02-01: CA\_n77-n260 and DC\_n77-n260**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010358 TP for 38.717-02-01: CA\_n48-n261 and DC\_n48-n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011649 (from R4-2010358).**

**R4-2011649 TP for 38.717-02-01: CA\_n48-n261 and DC\_n48-n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010366 TP for 38.717-02-01: CA\_n2-n261 and DC\_n2-n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011650 (from R4-2010366).**

**R4-2011650 TP for 38.717-02-01: CA\_n2-n261 and DC\_n2-n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010368 TP for 38.717-02-01: CA\_n2-n260 and DC\_n2-n260**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011651 (from R4-2010368).**

**R4-2011651 TP for 38.717-02-01: CA\_n2-n260 and DC\_n2-n260**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010383 Draft CR for NR CA including FR1 and FR2 with 2DL and xUL**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Revised to R4-2011652 (from R4-2010383).**

**R4-2011652 Draft CR for NR CA including FR1 and FR2 with 2DL and xUL**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010401 draftCR to introduce CADC\_n25\_n260 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Revised to R4-2011653 (from R4-2010401).**

**R4-2011653 draftCR to introduce CADC\_n25\_n260 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Return to.**

**R4-2010402 draftCR to introduce CADC\_n41\_n260 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Endorsed.**

**R4-2010403 draftCR to introduce CADC\_n66\_n260 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Not pursued.**

**R4-2010689 draft CR 38.101-3 to add CADC\_n41-n258**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-3 to add CADC\_n41-n258

**Discussion:**

**Decision: Endorsed.**

**R4-2010690 draft CR 38.101-3 to add CADC\_n66-n258**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-3 to add CADC\_n66-n258

**Discussion:**

**Decision: Endorsed.**

**R4-2010691 draft CR 38.101-3 to add CADC\_n25-n258**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-3 to add CADC\_n25-n258

**Discussion:**

**Decision: Endorsed.**

**R4-2010692 draft CR 38.101-3 to add CADC\_n41-n261**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-3 to add CADC\_n41-n261

**Discussion:**

**Decision: Endorsed.**

**R4-2010693 draft CR 38.101-3 to add DC\_n66-n260**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-3 to add DC\_n66-n260

**Discussion:**

**Decision: Not pursued.**

**R4-2010694 draft CR 38.101-3 to add DC\_n66-n261**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-3 to add DC\_n66-n261

**Discussion:**

**Decision: Not pursued.**

**R4-2010695 draft CR 38.101-3 to add CADC\_n25-n261**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-3 to add CADC\_n25-n261

**Discussion:**

**Decision: Endorsed.**

**R4-2010696 draft CR 38.101-3 to add CADC\_n25-n260**

*Type: pCR For: Approval  
 38.717-02-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-3 to add CADC\_n25-n260

**Discussion:**

**Decision: Not pursued.**

### 10.3 DC of 1 LTE band and 1 NR band [DC\_R17\_1BLTE\_1BNR\_2DL2UL]

#### 10.3.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core/Perf]

**R4-2010367 TR skeleton for TR 37.717-11-11 Rel-17 Dual Connectivity (DC) of 1 LTE band (1DL/1UL) and 1 NR band (1DL/1UL)**

*Type: draft TR For: Agreement  
 37.717-11-11 v0.0.0  
 Source: CHTTL*

**Discussion:**

**Decision: Agreed.**

**R4-2010369 TR 37.717-11-11 v0.1.0 Rel-17 Dual Connectivity (DC) of 1 LTE band (1DL/1UL) and 1 NR band (1DL/1UL)**

*Type: draft TR For: Agreement  
 37.717-11-11 v0.0.0  
 Source: CHTTL*

**Discussion:**

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

**R4-2010393 Revised WID for Rel-17 Dual Connectivity (DC) of 1 LTE band (1DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID revised For: Information  
 Source: CHTTL*

**Discussion:**

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

**R4-2010395 draft big CR for Rel-17 Dual Connectivity (DC) of 1 LTE band (1DL/1UL) and 1 NR band (1DL/1UL)**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: CHTTL*

**Discussion:**

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

#### 10.3.2 EN-DC without FR2 band [DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core]

**R4-2010236 TP for TR 37.717-11-11: DC\_8A\_n7A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.0  
 Source: Nokia*

**Discussion:**

**Decision: Revised to R4-2011595 (from R4-2010236).**

**R4-2011595 TP for TR 37.717-11-11: DC\_8A\_n7A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.0  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010257 Draft CR for 38.101-3 to introduce new inter-band NE-DC (1NR band +1LTE bands) within FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Samsung, SK Telecom, KT, LGU+*

**Discussion:**

**Decision: Endorsed.**

**R4-2010304 TP for TR 37.717-11-11 for DC\_66\_n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011599 (from R4-2010304).**

**R4-2011599 TP for TR 37.717-11-11 for DC\_66\_n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010305 TP for TR 37.717-11-11 for DC\_13\_n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011600 (from R4-2010305).**

**R4-2011600 TP for TR 37.717-11-11 for DC\_13\_n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010306 TP for TR 37.717-11-11 for DC\_5\_n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011601 (from R4-2010306).**

**R4-2011601 TP for TR 37.717-11-11 for DC\_5\_n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010307 TP for TR 37.717-11-11 for DC\_2\_n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Revised to R4-2011602 (from R4-2010307).**

**R4-2011602 TP for TR 37.717-11-11 for DC\_2\_n77**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Return to.**

**R4-2010384 TP for DC\_19\_n1 for TR 37.717-11-11**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Approved.**

**R4-2010394 TP for DC\_21\_n1 for TR 37.717-11-11**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Approved.**

**R4-2010396 TP for DC\_42\_n1 for TR 37.717-11-11**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Revised to R4-2011603 (from R4-2010396).**

**R4-2011603 TP for DC\_42\_n1 for TR 37.717-11-11**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010404 draftCR to introduce DC\_2A-48C\_n66 and 2A-48D\_n66 in DL to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Endorsed.**

**R4-2010405 draftCR to introduce DC\_48C\_n66 and 48D\_n66 in DL to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Endorsed.**

**R4-2010406 TP for 37.717-11-11 to introduce DC\_48\_n25A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Revised to R4-2011604 (from R4-2010406).**

**R4-2011604 TP for 37.717-11-11 to introduce DC\_48\_n25A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Return to.**

**R4-2010418 TP for 37.717-11-11 to introduce DC\_28A\_n1A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Noted.**

**R4-2010436 TP for 37.717-11-11 to introduce DC\_28A\_n2A and DC\_2A\_n28A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Revised to R4-2011611 (from R4-2010436).**

**R4-2011611 TP for 37.717-11-11 to introduce DC\_28A\_n2A and DC\_2A\_n28A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010511 TP for TR 37.717-11-11: DC\_4A\_n2A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Revised to R4-2011615 (from R4-2010511).**

**R4-2011615 TP for TR 37.717-11-11: DC\_4A\_n2A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Return to.**

**R4-2010554 TP to TR 37.717-11-11 DC\_4A\_n5A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011617 (from R4-2010554).**

**R4-2011617 TP to TR 37.717-11-11 DC\_4A\_n5A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010555 TP to TR 37.717-11-11 DC\_4A\_n7A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010641 Draft CR to TS 38.101-3: introduction of DC\_40A\_n79C**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Endorsed.**

**R4-2010877 TP for TR 37.717-11-11: DC\_28A\_n66A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010878 TP for TR 37.717-11-11: DC\_4A\_n28A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011622 (from R4-2010878).**

**R4-2011622 TP for TR 37.717-11-11: DC\_4A\_n28A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010879 TP for TR 37.717-11-11: DC\_66A\_n28A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011623 (from R4-2010879).**

**R4-2011623 TP for TR 37.717-11-11: DC\_66A\_n28A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010880 TP for TR 37.717-11-11: DC\_28A\_n1A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon, Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010881 DraftCR for 38.101-3 to add configuration DC\_40C\_n1A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010882 DraftCR for 38.101-3 to add UL configuration DC\_3C\_n78A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2009930 TP for TR 37.717-11-11 for DC\_2A\_n28A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011589 (from R4-2009930).**

**R4-2011589 TP for TR 37.717-11-11 for DC\_2A\_n28A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2009931 TP for 37.717-11-11 for DC\_28A\_n2A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011590 (from R4-2009931).**

**R4-2011590 TP for 37.717-11-11 for DC\_28A\_n2A**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2009978 TP for TR 37.717-11-11: DC\_42\_n3**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011592 (from R4-2009978).**

**R4-2011592 TP for TR 37.717-11-11: DC\_42\_n3**

*Type: pCR For: Approval  
 37.717-11-11 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

#### 10.3.3 EN-DC with FR2 band [DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core]

**R4-2010258 Draft CR for 38.101-3 to introduce new inter-band NE-DC (1NR band +1LTE band) including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Samsung, SK Telecom, KT, LGU+*

**Discussion:**

**Decision: Revised to R4-2011596 (from R4-2010258).**

**R4-2011596 Draft CR for 38.101-3 to introduce new inter-band NE-DC (1NR band +1LTE band) including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Samsung, SK Telecom, KT, LGU+*

**Discussion:**

**Decision: Return to.**

**R4-2010309 Draft CR to 38.101-3: Introduce CA configurations for DC\_2\_n26, DC\_5\_n261, DC\_13\_n261, DC\_48\_n261 and DC\_66\_n261**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Endorsed.**

**R4-2010317 TP for TR 37.717-11-11 for DC\_66\_n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Approved.**

**R4-2010319 TP for TR 37.717-11-11 for DC\_48\_n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Approved.**

**R4-2010325 TP for TR 37.717-11-11 for DC\_13\_n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Approved.**

**R4-2010327 TP for TR 37.717-11-11 for DC\_5\_n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Approved.**

**R4-2010328 TP for TR 37.717-11-11 for DC\_2\_n261**

*Type: discussion For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

**Decision: Approved.**

**R4-2010640 Draft CR to TS 38.101-3: ENDC 41+n258 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Endorsed.**

### 10.4 DC of 2 LTE band and 1 NR band [DC\_R17\_2BLTE\_1BNR\_3DL2UL]

**R4-2009714 TP for TR 37.717-21-11: DC\_1-32\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-21-11 to include DC\_1-32\_n28.

**Discussion:**

**Decision: Revised to R4-2011584 (from R4-2009714).**

**R4-2011584 TP for TR 37.717-21-11: DC\_1-32\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-21-11 to include DC\_1-32\_n28.

**Discussion:**

**Decision: Return to.**

**R4-2009715 TP for TR 37.717-21-11: DC\_7-32\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-21-11 to include DC\_7-32\_n28.

**Discussion:**

**Decision: Revised to R4-2011585 (from R4-2009715).**

**R4-2011585 TP for TR 37.717-21-11: DC\_7-32\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-21-11 to include DC\_7-32\_n28.

**Discussion:**

**Decision: Return to.**

**R4-2009716 TP for TR 37.717-21-11: DC\_7-32\_n78**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-21-11 to include DC\_7-32\_n78.

**Discussion:**

**Decision: Approved.**

**R4-2009717 TP for TR 37.717-21-11: DC\_20-32\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-21-11 to include DC\_20-32\_n28.

**Discussion:**

**Decision: Revised to R4-2011586 (from R4-2009717).**

**R4-2011586 TP for TR 37.717-21-11: DC\_20-32\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-21-11 to include DC\_20-32\_n28.

**Discussion:**

**Decision: Return to.**

#### 10.4.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core/Perf]

**R4-2010371 TR skeleton of TR 37.717-21-11**

*Type: draft TR For: Agreement  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Agreed.**

**R4-2010372 Revised WID: Rel-17 Dual Connectivity of 2 bands LTE inter-band CA and 1 NR band**

*Type: WID revised For: Information  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2010373 draft CR on introduction of completed EN-DC of 2 bands LTE and 1 band NR from RAN4#96-e into TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

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

#### 10.4.2 EN-DC without FR2 band [DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core]

**R4-2010007 Draft CR for TS 38.101-3: Support of n77(2A) for DC\_41-42\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011594 (from R4-2010007).**

**R4-2011594 Draft CR for TS 38.101-3: Support of n77(2A) for DC\_41-42\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

**R4-2010232 TP for TR 37.717.21-11: DC\_2A-48A\_n5A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.0  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010233 TP for TR 37.717.21-11: DC\_5A-48A\_n12A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.0  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010234 TP for TR 37.717.21-11: DC\_5A-48A\_n71A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.0  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010235 TP for TR 37.717.21-11: DC\_12A-48A\_n5A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.0  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010245 TP for TR 37.717-21-11 DC\_3A\_(n)41AA**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Approved.**

**R4-2010259 Draft CR for 38.101-3 to introduce new inter-band NE-DC (1NR band +2LTE bands) within FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Samsung, SK Telecom, KT, LGU+*

**Discussion:**

**Decision: Endorsed.**

**R4-2010407 TP for 37.717-21-11 to introduce DC\_2A-48A\_n48A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Revised to R4-2011605 (from R4-2010407).**

**R4-2011605 TP for 37.717-21-11 to introduce DC\_2A-48A\_n48A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Return to.**

**R4-2010408 TP for 37.717-21-11 to introduce DC\_2A-71A\_n71A and DC\_66A-71A\_n71A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Revised to R4-2011606 (from R4-2010408).**

**R4-2011606 TP for 37.717-21-11 to introduce DC\_2A-71A\_n71A and DC\_66A-71A\_n71A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Return to.**

**R4-2010409 TP for 37.717-21-11 to introduce DC\_48-66A\_n25A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Revised to R4-2011607 (from R4-2010409).**

**R4-2011607 TP for 37.717-21-11 to introduce DC\_48-66A\_n25A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Return to.**

**R4-2010410 TP for 37.717-21-11 to introduce DC\_48A-66A\_n48A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Approved.**

**R4-2010419 TP for 37.717-21-11 to introduce DC\_3A-8A\_n40A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Revised to R4-2011608 (from R4-2010419).**

**R4-2011608 TP for 37.717-21-11 to introduce DC\_3A-8A\_n40A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010420 TP for 37.717-21-11 to introduce DC\_3A-28A\_n1A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Revised to R4-2011609 (from R4-2010420).**

**R4-2011609 TP for 37.717-21-11 to introduce DC\_3A-28A\_n1A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010421 TP for 37.717-21-11 to introduce DC\_7A-8A\_n40A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010422 TP for 37.717-21-11 to introduce DC\_7A-28A\_n1A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Revised to R4-2011610 (from R4-2010422).**

**R4-2011610 TP for 37.717-21-11 to introduce DC\_7A-28A\_n1A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010439 TP for DC\_3-19\_n1 for TR 37.717-21-11**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Approved.**

**R4-2010452 TP for DC\_3-21\_n1 for TR 37.717-21-11**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Revised to R4-2011612 (from R4-2010452).**

**R4-2011612 TP for DC\_3-21\_n1 for TR 37.717-21-11**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010453 TP for DC\_3-42\_n1 for TR 37.717-21-11**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Approved.**

**R4-2010454 TP for DC\_19-21\_n1 for TR 37.717-21-11**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Approved.**

**R4-2010456 TP for DC\_19-42\_n1 for TR 37.717-21-11**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Revised to R4-2011613 (from R4-2010456).**

**R4-2011613 TP for DC\_19-42\_n1 for TR 37.717-21-11**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010458 TP for DC\_21-42\_n1 for TR 37.717-21-11**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Revised to R4-2011614 (from R4-2010458).**

**R4-2011614 TP for DC\_21-42\_n1 for TR 37.717-21-11**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010512 TP for TR 37.717-21-11: DC\_7-66\_n5**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Revised to R4-2011616 (from R4-2010512).**

**R4-2011616 TP for TR 37.717-21-11: DC\_7-66\_n5**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Return to.**

**R4-2010513 TP for TR 37.717-21-11: DC\_2-7\_n5**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Approved.**

**R4-2010556 TP to TR 37.717-21-11 DC\_1A-40A\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010557 TP to TR 37.717-21-11 DC\_3A-40A\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010558 TP to TR 37.717-21-11 DC\_7A-40A\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010559 TP to TR 37.717-21-11 DC\_8A-40A\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011618 (from R4-2010559).**

**R4-2011618 TP to TR 37.717-21-11 DC\_8A-40A\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010697 TP for TR 37.717-21-11 to include DC\_2A-12A\_n5A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.717-21-11 to include DC\_2A-12A\_n5A

**Discussion:**

**Decision: Revised to R4-2011620 (from R4-2010697).**

**R4-2011620 TP for TR 37.717-21-11 to include DC\_2A-12A\_n5A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.717-21-11 to include DC\_2A-12A\_n5A

**Discussion:**

**Decision: Return to.**

**R4-2010698 TP for TR 37.717-21-11 to include DC\_2A-5A\_n12A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.717-21-11 to include DC\_2A-5A\_n12A

**Discussion:**

**Decision: Revised to R4-2011621 (from R4-2010698).**

**R4-2011621 TP for TR 37.717-21-11 to include DC\_2A-5A\_n12A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.717-21-11 to include DC\_2A-5A\_n12A

**Discussion:**

**Decision: Return to.**

**R4-2010699 TP for TR 37.717-21-11 to include DC\_5A-66A\_n12A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.717-21-11 to include DC\_5A-66A\_n12A

**Discussion:**

**Decision: Approved.**

**R4-2010700 TP for TR 37.717-21-11 to include DC\_66A\_(n)5AA**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.717-21-11 to include DC\_66A\_(n)5AA

**Discussion:**

**Decision: Approved.**

**R4-2010701 TP for TR 37.717-21-11 to include DC\_12A-66A\_n5A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.717-21-11 to include DC\_12A-66A\_n5A

**Discussion:**

**Decision: Approved.**

**R4-2010883 TP for TR 37.717-21-11: DC\_7A-8A\_n28A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010884 TP for TR 37.717-21-11: DC\_20A-28A\_n3A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010885 TP for TR 37.717-21-11: DC\_28A-66A\_n66A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010886 TP for TR 37.717-21-11: DC\_7A-28A\_n66A / DC\_7C-28A\_n66A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010887 TP for TR 37.717-21-11: DC\_2A-28A\_n66A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010888 TP for TR 37.717-21-11: DC\_3A-28A\_n1A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010889 TP for TR 37.717-21-11: DC\_7A-28A\_n1A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010890 TP for TR 37.717-21-11: DC\_8A-40A\_n1A / DC\_8A-40C\_n1A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010891 DraftCR for 38.101-3 to add configuration DC\_3A-40C\_n1A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010892 DraftCR for 38.101-3 to add configuration DC\_7A-40C\_n1A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010893 DraftCR for 38.101-3 to add UL configuration DC\_3C\_n78A for DC\_3C-20A\_n78A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010894 TP for TR 37.717-21-11: DC\_1A-32A\_n3A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon, CKH IOD UK*

**Discussion:**

**Decision: Approved.**

**R4-2010895 TP for TR 37.717-21-11: DC\_3A-32A\_n1A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon, CKH IOD UK*

**Discussion:**

**Decision: Approved.**

**R4-2009924 TP for TR 37.717-21-11 for DC\_2A-4A\_n28A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2009925 TP for TR 37.717-21-11 for DC\_2A-7A\_n28A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2009926 TP for TR 37.717-21-11 for DC\_2A-66A\_n28A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2009927 TP for TR 37.717-21-11 for DC\_4A-7A\_n28A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2009928 TP for TR 37.717-21-11 for DC\_5-7\_n66**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2009929 TP for TR 37.717-21-11 for DC\_7A-66A\_n28A**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2009992 TP for TR 37.717-21-11: EN-DC\_1-11\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Approved.**

**R4-2009993 TP for TR 37.716-21-11: EN-DC\_3-11\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Approved.**

**R4-2009994 TP for TR 37.717-21-11: EN-DC\_8-11\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Approved.**

**R4-2009995 TP for TR 37.717-21-11: EN-DC\_3-11\_n77**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011593 (from R4-2009995).**

**R4-2011593 TP for TR 37.717-21-11: EN-DC\_3-11\_n77**

*Type: pCR For: Approval  
 37.717-21-11 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

#### 10.4.3 EN-DC with FR2 band [DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core]

**R4-2010352 Draft CR for 38.101-3 to introduce new inter-band NE-DC (1NR band +2LTE bands) including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Samsung, SK Telecom, KT, LGU+*

**Discussion:**

**Decision: Endorsed.**

### 10.5 DC of 3 LTE band and 1 NR band [DC\_R17\_3BLTE\_1BNR\_4DL2UL]

**R4-2009770 TP for TR 37.717-31-11: DC\_1-7-32\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to include DC\_1-7-32\_n28.

**Discussion:**

**Decision: Return to.**

**R4-2009771 TP for TR 37.717-31-11: DC\_1-7-32\_n78**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to include DC\_1-7-32\_n78.

**Discussion:**

**Decision: Approved.**

**R4-2009772 TP for TR 37.717-31-11: DC\_1-20-32\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to include DC\_1-20-32\_n28.

**Discussion:**

**Decision: Return to.**

**R4-2009774 TP for TR 37.717-31-11: DC\_1-20-32\_n78**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to include DC\_1-20-32\_n78.

**Discussion:**

**Decision: Approved.**

**R4-2009775 TP for TR 37.717-31-11: DC\_3-7-32\_n78**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to include DC\_3-7-32\_n78.

**Discussion:**

**Decision: Approved.**

**R4-2009776 TP for TR 37.717-31-11: DC\_3-20-32\_n78**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to include DC\_3-20-32\_n78.

**Discussion:**

**Decision: Revised to R4-2011587 (from R4-2009776).**

**R4-2011587 TP for TR 37.717-31-11: DC\_3-20-32\_n78**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to include DC\_3-20-32\_n78.

**Discussion:**

**Decision: Return to.**

**R4-2009777 TP for TR 37.717-31-11: DC\_7-20-32\_n1**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to include DC\_7-20-32\_n1.

**Discussion:**

**Decision: Revised to R4-2011588 (from R4-2009777).**

**R4-2011588 TP for TR 37.717-31-11: DC\_7-20-32\_n1**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to include DC\_7-20-32\_n1.

**Discussion:**

**Decision: Return to.**

**R4-2009778 TP for TR 37.717-31-11: DC\_7-20-32\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to include DC\_7-20-32\_n28.

**Discussion:**

**Decision: Return to.**

#### 10.5.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_3BLTE\_1BNR\_4DL2UL-Core/Perf]

**R4-2010673 Revised WID LTE 3DL and one NR band Rel-17**

*Type: WID revised For: Information  
 Source: Ericsson*

**Abstract:**

Revised WID LTE 3DL and one NR band Rel-17

**Discussion:**

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

**R4-2010677 CR introduction completed band combinations 37.717-31-11 -> 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0336 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 37.717-31-11 -> 38.101-3

**Discussion:**

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

**R4-2010681 TR skeleton 37.717-31-11 v0.0.1 Rel-17 DC combinations LTE 3DL and one NR band**

*Type: draft TR For: Agreement  
 37.717-31-11 v0.0.1  
 Source: Ericsson*

**Abstract:**

TR skeleton 37.717-31-11 v0.0.1 Rel-17 DC combinations LTE 3DL and one NR band

**Discussion:**

**Decision: Agreed.**

#### 10.5.2 EN-DC without FR2 band [DC\_R17\_3BLTE\_1BNR\_4DL2UL-Core]

**R4-2010008 Draft CR for TS 38.101-3: Support of n77(2A) for DC\_1-3-42\_n77, DC\_1-41-42\_n77 and DC\_3-41-42\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Endorsed.**

**R4-2010246 TP for TR 37.717-31-11 DC\_1-3\_(n)41**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Approved.**

**R4-2010247 TP for TR 37.717-31-11 DC\_1-3-41\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Approved.**

**R4-2010260 Draft CR for 38.101-3 to introduce new inter-band NE-DC (1NR band +3LTE bands) within FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Samsung, SK Telecom, KT, LGU+*

**Discussion:**

**Decision: Endorsed.**

**R4-2010417 TP for 37.717-31-11 to introduce DC\_2A-66A-71A\_n71A**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Return to.**

**R4-2010434 TP for 37.717-31-11 to introduce DC\_3A-7A-8A\_n40A**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010435 TP for 37.717-31-11 to introduce DC\_3A-7A-28A\_n1A**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010437 TP for 37.717-31-11 to introduce DC\_5A-7-66A\_n66A**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010514 TP for DC\_3-19-42\_n1 for TR 37.717-31-11**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010515 TP for DC\_3-21-42\_n1 for TR 37.717-31-11**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010516 TP for DC\_19-21-42\_n1 for TR 37.717-31-11**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010896 TP for TR 37.717-31-11: DC\_2A-28A-66A\_n66A**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010897 TP for TR 37.717-31-11: DC\_7A-28A-66A\_n66A / DC\_7C-28A-66A\_n66A**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010898 TP for TR 37.717-31-11: DC\_2A-7A-28A\_n66A / DC\_2A-7C-28A\_n66A**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010899 TP for TR 37.717-31-11: DC\_3A-7A-28A\_n1A**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2009996 TP for TR 37.717-31-11: EN-DC\_1-8-11\_n3**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Approved.**

**R4-2009997 TP for TR 37.717-31-11: EN-DC\_1-8-42\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Approved.**

#### 10.5.3 EN-DC with FR2 band [DC\_R17\_3BLTE\_1BNR\_4DL2UL-Core]

**R4-2010261 Draft CR for 38.101-3 to introduce new inter-band NE-DC (1NR band +3LTE bands) including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Samsung, SK Telecom, KT, LGU+*

**Discussion:**

**Decision: Endorsed.**

### 10.6 DC of 4 LTE band and 1 NR band [DC\_R17\_4BLTE\_1BNR\_5DL2UL]

**R4-2009860 TP for TR 37.717-41-11: DC\_1-7-20-32\_n28**

*Type: pCR For: Approval  
 37.717-41-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-41-11 to include DC\_1-7-20-32\_n28.

**Discussion:**

**Decision: Return to.**

**R4-2009861 TP for TR 37.717-41-11: DC\_1-7-20-32\_n78**

*Type: pCR For: Approval  
 37.717-41-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-41-11 to include DC\_1-7-20-32\_n78.

**Discussion:**

**Decision: Approved.**

**R4-2009862 TP for TR 37.717-41-11: DC\_3-7-20-32\_n78**

*Type: pCR For: Approval  
 37.717-41-11 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-41-11 to include DC\_3-7-20-32\_n78.

**Discussion:**

**Decision: Return to.**

#### 10.6.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_4BLTE\_1BNR\_5DL2UL-Core/Perf]

**R4-2010397 Revised Rel-17 WID on DC of 4 bands LTE inter-band CA (4DL1UL) and 1 NR band (1DL1UL)**

*Type: WID revised For: Information  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Inclusion of requests provided at RAN4#96

**Discussion:**

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

**R4-2010398 CR to introduce new combinations of LTE 4band + NR 1band for TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0332 Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Inclusion of approved combinations provided at RAN4#96

**Discussion:**

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

**R4-2010399 draftTR 37.717-41-11 v0.0.1**

*Type: draft TR For: Agreement  
 37.717-41-11 v0.0.1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Draft skeleton

**Discussion:**

**Decision: Agreed.**

**R4-2010400 draftTR 37.717-41-11 v0.1.0**

*Type: draft TR For: Agreement  
 37.717-41-11 v0.0.1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Inclusion of TPs provided at RAN4#96

**Discussion:**

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

#### 10.6.2 EN-DC without FR2 band [DC\_R17\_4BLTE\_1BNR\_5DL2UL-Core]

**R4-2010009 Draft CR for TS 38.101-3: Support of n77(2A) for DC\_1-3-41-42\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Endorsed.**

**R4-2010262 Draft CR for 38.101-3 to introduce new inter-band NE-DC (1NR band +4LTE bands) within FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Samsung, SK Telecom, KT, LGU+*

**Discussion:**

**Decision: Endorsed.**

**R4-2010900 TP for TR 37.717-41-11: DC\_2A-7A-28A-66A\_n66A / DC\_2A-7C-28A-66A\_n66A**

*Type: pCR For: Approval  
 37.717-41-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011624 (from R4-2010900).**

**R4-2011624 TP for TR 37.717-41-11: DC\_2A-7A-28A-66A\_n66A / DC\_2A-7C-28A-66A\_n66A**

*Type: pCR For: Approval  
 37.717-41-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

#### 10.6.3 EN-DC with FR2 band [DC\_R17\_4BLTE\_1BNR\_5DL2UL-Core]

**R4-2010263 Draft CR for 38.101-3 to introduce new inter-band NE-DC (1NR band +4LTE bands) including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Samsung, SK Telecom, KT, LGU+*

**Discussion:**

**Decision: Endorsed.**

### 10.7 DC of x bands (x=1,2, 3, 4) LTE inter-band CA and 2 bands NR inter-band CA [DC\_R17\_xBLTE\_2BNR\_yDL2UL]

#### 10.7.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core/Per] 10.7.2 EN-DC including NR inter CA without FR2 band [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core]

**R4-2010130 TR 37.717-11-21 v0.0.1 TR skeleton: LTE(xDL/1UL)+ NR(2DL/1UL) DC in Rel-17**

*Type: draft TR For: Agreement  
 37.717-11-21 v0.0.1  
 Source: LG Electronics Polska*

**Discussion:**

**Decision: Agreed.**

**R4-2010131 Revised WID on LTE (xDL/UL x=1.2,3,4) with NR 2 bands (2DL/1UL) EN DC in Rel-17**

*Type: WID revised For: Information  
 Source: LG Electronics Polska*

**Discussion:**

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

**R4-2010132 Introducing CR on new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in Rel-17**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0328 Cat: B (Rel-17)  
  
 Source: LG Electronics Polska*

**Discussion:**

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

#### 10.7.2 EN-DC including NR inter CA without FR2 band [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core]

**R4-2010000 TP for TR 37.717-11-21: EN-DC\_11\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Noted.**

**R4-2010001 TP for TR 37.717-11-21: EN-DC\_11\_n3-n28**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011656 (from R4-2010001).**

**R4-2011656 TP for TR 37.717-11-21: EN-DC\_11\_n3-n28**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

**R4-2010002 TP for TR 37.717-11-21: EN-DC\_1-42\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011657 (from R4-2010002).**

**R4-2011657 TP for TR 37.717-11-21: EN-DC\_1-42\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

**R4-2010003 TP for TR 37.717-11-21: EN-DC\_3-42\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011658 (from R4-2010003).**

**R4-2011658 TP for TR 37.717-11-21: EN-DC\_3-42\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

**R4-2010004 TP for TR 37.717-11-21: EN-DC\_8-42\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011659 (from R4-2010004).**

**R4-2011659 TP for TR 37.717-11-21: EN-DC\_8-42\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

**R4-2010005 TP for TR 37.717-11-21: EN-DC\_1-3-8\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011660 (from R4-2010005).**

**R4-2011660 TP for TR 37.717-11-21: EN-DC\_1-3-8\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

**R4-2010242 TP for TR 37.717-11-21 DC\_1A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Revised to R4-2011661 (from R4-2010242).**

**R4-2011661 TP for TR 37.717-11-21 DC\_1A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Return to.**

**R4-2010243 TP for TR 37.717-11-21 DC\_1A-3A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Approved.**

**R4-2010244 TP for TR 37.717-11-21 DC\_3A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Approved.**

**R4-2010411 TP for 37.717-11-21 to introduce DC\_2A\_n48A-n66A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Approved.**

**R4-2010412 TP for 37.717-11-21 to introduce DC\_2A-48A\_n48A-n66A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Approved.**

**R4-2010413 TP for 37.717-11-21 to introduce DC\_48A\_n25A-n48A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Revised to R4-2011662 (from R4-2010413).**

**R4-2011662 TP for 37.717-11-21 to introduce DC\_48A\_n25A-n48A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Return to.**

**R4-2010414 TP for 37.717-11-21 to introduce DC\_48A\_n48A-n66A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Revised to R4-2011663 (from R4-2010414).**

**R4-2011663 TP for 37.717-11-21 to introduce DC\_48A\_n48A-n66A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Return to.**

**R4-2010415 TP for 37.717-11-21 to introduce DC\_48A-66A\_n25A-n48A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Approved.**

**R4-2010416 TP for 37.717-11-21 to introduce DC\_66A\_n25A-n48A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Revised to R4-2011664 (from R4-2010416).**

**R4-2011664 TP for 37.717-11-21 to introduce DC\_66A\_n25A-n48A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia, T-Mobile*

**Discussion:**

**Decision: Return to.**

**R4-2010423 TP for 37.717-11-21 to introduce DC\_1A-8A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010424 TP for 37.717-11-21 to introduce DC\_3A-7A\_n1A-n40A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010425 TP for 37.717-11-21 to introduce DC\_3A-7A-8A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010426 TP for 37.717-11-21 to introduce DC\_3A-7A-28A\_n1A-n40A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010427 TP for 37.717-11-21 to introduce DC\_3A-8A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010428 TP for 37.717-11-21 to introduce DC\_3A-28A\_n1A-n40A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010429 TP for 37.717-11-21 to introduce DC\_7A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Revised to R4-2011665 (from R4-2010429).**

**R4-2011665 TP for 37.717-11-21 to introduce DC\_7A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010430 TP for 37.717-11-21 to introduce DC\_7A-8A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010431 TP for 37.717-11-21 to introduce DC\_7A-28A\_n1A-n40A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Approved.**

**R4-2010432 TP for 37.717-11-21 to introduce DC\_8A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Revised to R4-2011666 (from R4-2010432).**

**R4-2011666 TP for 37.717-11-21 to introduce DC\_8A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2010433 TP for 37.717-11-21 to introduce DC\_28A\_n1A-n40A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Revised to R4-2011667 (from R4-2010433).**

**R4-2011667 TP for 37.717-11-21 to introduce DC\_28A\_n1A-n40A**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: Nokia*

**Discussion:**

**Decision: Return to.**

**R4-2009998 TP for TR 37.717-11-21: EN-DC\_1\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011654 (from R4-2009998).**

**R4-2011654 TP for TR 37.717-11-21: EN-DC\_1\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

**R4-2009999 TP for TR 37.717-11-21: EN-DC\_8\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Revised to R4-2011655 (from R4-2009999).**

**R4-2011655 TP for TR 37.717-11-21: EN-DC\_8\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: SoftBank Corp.*

**Discussion:**

**Decision: Return to.**

#### 10.7.3 EN-DC including NR inter CA with FR2 band [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core]

**R4-2010133 TP on initial summary of self-interference analysis for new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in Rel-17**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.1  
 Source: LG Electronics Polska*

**Discussion:**

**Decision: Approved.**

**R4-2010318 TP for TR 37.717-11-21: support of DC\_3\_n1-n257, DC\_3-3\_n1-n257, DC\_7\_n1-n257, DC\_7-7\_n1-n257 with 257D to 257M**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.0  
 Source: CHTTL*

**Discussion:**

**Decision: Approved.**

**R4-2010338 TP for TR 37.717-11-21: support of DC\_3-7\_n1-n257, DC\_3-3-7\_n1-n257, DC\_3-7-7\_n1-n257, DC\_3-3-7-7\_n1-n257 with 257D to 257M**

*Type: pCR For: Approval  
 37.717-11-21 v0.0.0  
 Source: CHTTL*

**Discussion:**

**Decision: Approved.**

### 10.8 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\_R17]

#### 10.8.1 Rapporteur Input (WID/TR/CR) [NR\_SUL\_combos\_R17-Core/Per]

**R4-2011222 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: Information  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2011223 TR 37.717-00-00 v0.0.1**

*Type: draft TR For: Agreement  
 37.717-00-00 v0.0.1  
 Source: Huawei, HiSilicon*

**Abstract:**

TR skeleton

**Discussion:**

**Decision: Agreed.**

**R4-2011224 TR 37.717-00-00 v0.1.0**

*Type: draft TR For: Agreement  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To capture the approved TPs in this meeting

**Discussion:**

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

**R4-2011225 Draft CR on Introduction of completed SUL band combinations into TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2011226 Draft CR on Introduction of completed SUL band combinations into TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

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

#### 10.8.2 UE RF [NR\_SUL\_combos\_R17-Core]

**R4-2010547 TP to TR 37.717-00-00 SUL\_n41A-n83A**

*Type: pCR For: Approval  
 37.717-00-00 v0.0.1  
 Source: Huawei, HiSilicon, Etisalat, CMCC*

**Discussion:**

**Decision: Revised to R4-2011668 (from R4-2010547).**

**R4-2011668 TP to TR 37.717-00-00 SUL\_n41A-n83A**

*Type: pCR For: Approval  
 37.717-00-00 v0.0.1  
 Source: Huawei, HiSilicon, Etisalat, CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2010548 TP to TR 37.717-00-00 SUL\_n79A-n83A**

*Type: pCR For: Approval  
 37.717-00-00 v0.0.1  
 Source: Huawei, CBN, CMCC, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011669 (from R4-2010548).**

**R4-2011669 TP to TR 37.717-00-00 SUL\_n79A-n83A**

*Type: pCR For: Approval  
 37.717-00-00 v0.0.1  
 Source: Huawei, CBN, CMCC, HiSilicon, ABS*

**Discussion:**

**Decision: Return to.**

**R4-2010549 DraftCR to 38101-1 on CA\_n78C\_SUL\_n78A-n80A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon, CKH IOD UK, MediaTek, Spreadtrum*

**Discussion:**

**Decision: Endorsed.**

**R4-2010550 DraftCR to 38101-1 on CA\_n78C\_SUL\_n78A-n84A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon, CKH IOD UK, MediaTek, Spreadtrum*

**Discussion:**

**Decision: Revised to R4-2011670 (from R4-2010550).**

**R4-2011670 DraftCR to 38101-1 on CA\_n78C\_SUL\_n78A-n84A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon, CKH IOD UK, MediaTek, Spreadtrum*

**Discussion:**

**Decision: Return to.**

**R4-2010551 DraftCR to 38101-1 on CA\_n79C\_SUL\_n79A-n80A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, CMCC, HiSilicon, MediaTek, Spreadtrum*

**Discussion:**

**Decision: Endorsed.**

**R4-2010552 DraftCR to 38101-1 on CA\_n41C\_SUL\_n41A-n80A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, CMCC, HiSilicon, MediaTek, Spreadtrum*

**Discussion:**

**Decision: Endorsed.**

**R4-2010553 TP to TR 37.717-00-00 DC\_28A\_SUL\_n41A-n83A**

*Type: pCR For: Approval  
 37.717-00-00 v0.0.1  
 Source: Huawei, HiSilicon, Etisalat, CMCC*

**Discussion:**

**Decision: Revised to R4-2011671 (from R4-2010553).**

**R4-2011671 TP to TR 37.717-00-00 DC\_28A\_SUL\_n41A-n83A**

*Type: pCR For: Approval  
 37.717-00-00 v0.0.1  
 Source: Huawei, HiSilicon, Etisalat, CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2010919 TP for TR 37.717-00-00 for CA\_n28A-n41A\_SUL\_n41A-n83A**

*Type: pCR For: Approval  
 37.717-00-00 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011672 (from R4-2010919).**

**R4-2011672 TP for TR 37.717-00-00 for CA\_n28A-n41A\_SUL\_n41A-n83A**

*Type: pCR For: Approval  
 37.717-00-00 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010920 TP for TR 37.717-00-00 for CA\_n28A-n79A\_SUL\_n79A-n83A**

*Type: pCR For: Approval  
 37.717-00-00 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011673 (from R4-2010920).**

**R4-2011673 TP for TR 37.717-00-00 for CA\_n28A-n79A\_SUL\_n79A-n83A**

*Type: pCR For: Approval  
 37.717-00-00 v0.0.1  
 Source: Huawei, HiSilicon, CBN, ABS*

**Discussion:**

**Decision: Return to.**

### 10.9 NR Inter-band Carrier Aggregation for 3 bands DL with 1 band UL [NR\_CA\_R17\_3BDL\_1BUL]

#### 10.9.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R17\_3BDL\_1BUL-Core/Per]

**R4-2009812 TR 38.717-03-01 on Rel-17 NR inter-band Carrier Aggregation (CA) for**

**3 Down Link (DL) / 1 Up Link (UL)**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: CATT*

**Discussion:**

**Decision: Agreed.**

**R4-2009815 Revised WID on Rel-17 NR inter-band CA of 3DL bands and 1UL band**

*Type: WID revised For: Information  
 Source: CATT*

**Discussion:**

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

#### 10.9.2 UE RF [NR\_CA\_R17\_3BDL\_1BUL-Core]

**R4-2010252 TP for TR 38.717-03-01 CA\_n3A-n28A-n41A**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Approved.**

**R4-2010253 TP for TR 38.717-03-01 CA\_n3A-n41A-n78A**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Approved.**

**R4-2010528 TP to TR 38.717-03-01: CA\_n5-n25-n66**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.0  
 Source: Nokia, Bell Mobility*

**Discussion:**

**Decision: Approved.**

**R4-2010530 TP to TR 38.717-03-01: CA\_n5-n25-n78**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.0  
 Source: Nokia, Bell Mobility*

**Discussion:**

**Decision: Approved.**

**R4-2010575 TP for CA 3DL1UL n1-n77-n79 for TR 38.717-03-01**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Revised to R4-2011674 (from R4-2010575).**

**R4-2011674 TP for CA 3DL1UL n1-n77-n79 for TR 38.717-03-01**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010579 TP for CA 3DL1UL n1-n78-n79 for TR 38.717-03-01**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Revised to R4-2011675 (from R4-2010579).**

**R4-2011675 TP for CA 3DL1UL n1-n78-n79 for TR 38.717-03-01**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Return to.**

**R4-2010642 TP for TR38.717-03-01\_CA\_n39A-n40A-n79A**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Approved.**

**R4-2010643 TP for TR38.717-03-01\_CA\_n39A-n40A-n41A**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Approved.**

**R4-2010687 TP to add CA\_n25A-n48A-n66A, CA\_n25A-n48(2A)-n66A, CA\_n25A-n48C-n66A**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n25A-n48A-n66A, CA\_n25A-n48(2A)-n66A, CA\_n25A-n48C-n66A

**Discussion:**

**Decision: Approved.**

**R4-2009687 TP for CA\_n1-n77-n257 3DL/1UL for TR38.717-03-01**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

**Decision: Approved.**

**R4-2009688 TP for CA\_n1-n78-n257 3DL/1DL for TR38.717-03-01**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

**Decision: Approved.**

**R4-2009689 TP for CA\_n1-n79-n257 3UL/1DL for TR38.717-03-01**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

**Decision: Approved.**

**R4-2009813 Draft big CR on Introducing NR inter-band CA for 3DL Bands and 1UL band for 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: CATT*

**Discussion:**

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

**R4-2009814 Draft big CR on Introducing NR inter-band CA for 3DL Bands and 1UL band for 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: CATT*

**Discussion:**

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

### 10.10 NR Inter-band Carrier Aggregation for 4 bands DL with 1 band UL [NR\_CA\_R17\_4BDL\_1BUL]

#### 10.10.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R17\_4BDL\_1BUL-Core/Per]

**R4-2010674 Revised WID 4 bands NR CA Rel-17**

*Type: WID revised For: Information  
 Source: Ericsson*

**Abstract:**

Revised WID 4 bands NR CA Rel-17

**Discussion:**

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

**R4-2010678 CR introduction completed band combinations 38.717-04-01 -> 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0452 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.717-04-01 -> 38.101-1

**Discussion:**

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

**R4-2010679 CR introduction completed band combinations 38.717-04-01 -> 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0337 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.717-04-01 -> 38.101-3

**Discussion:**

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

**R4-2010682 TR skeleton 38.717-04-01 v0.0.1 Rel-17 NR Inter-band 4 bands CA**

*Type: draft TR For: Agreement  
 38.717-04-01 v0.0.1  
 Source: Ericsson*

**Abstract:**

TR skeleton 38.717-04-01 v0.0.1 Rel-17 NR Inter-band 4 bands CA

**Discussion:**

**Decision: Agreed.**

#### 10.10.2 UE RF [NR\_CA\_R17\_4BDL\_1BUL-Core]

**R4-2010254 TP for TR 38.717-04-01 CA\_n3A-n28A-n41A-n78A**

*Type: pCR For: Approval  
 38.717-04-01 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Approved.**

**R4-2010688 TP to add CA\_n25A-n41A-n66A-n71A, CA\_n25A-n41(2A)-n66A-n71A, CA\_n25A-n41C-n66A-n71A**

*Type: pCR For: Approval  
 38.717-04-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n25A-n41A-n66A-n71A, CA\_n25A-n41(2A)-n66A-n71A, CA\_n25A-n41C-n66A-n71A

**Discussion:**

**Decision: Revised to R4-2011676 (from R4-2010688).**

**R4-2011676 TP to add CA\_n25A-n41A-n66A-n71A, CA\_n25A-n41(2A)-n66A-n71A, CA\_n25A-n41C-n66A-n71A**

*Type: pCR For: Approval  
 38.717-04-01 v0.0.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n25A-n41A-n66A-n71A, CA\_n25A-n41(2A)-n66A-n71A, CA\_n25A-n41C-n66A-n71A

**Discussion:**

**Decision: Return to.**

### 10.11 NR Inter-band Carrier Aggregation/Dual connectivity for 3 bands DL with 2 bands UL [NR\_CADC\_R17\_3BDL\_2BUL]

#### 10.11.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_3BDL\_2BUL-Core/Per]

**R4-2010653 Revised WID on Rel-17 NR Inter-band Carrier AggregationDual Connectivity for 3 bands DL with 2 bands UL**

*Type: WID revised For: Information  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010654 Draft CR to reflect the completed NR inter band CA DC combinations for 3 bands DL with 2 bands UL into TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010655 Draft CR to reflect the completed NR inter band CA DC combinations for 3 bands DL with 2 bands UL into TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010791 TR 38.717-03-02 v0.0.1**

*Type: draft TR For: Agreement  
 38.717-03-02 v0.0.1  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

**Decision: Agreed.**

**R4-2010793 TR 38.717-03-02 v0.1.0**

*Type: draft TR For: Agreement  
 38.717-03-02 v0.1.0  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

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

#### 10.11.2 UE RF [NR\_CADC\_R17\_3BDL\_2BUL-Core]

**R4-2010510 Draft CR to 38.101-1: CA\_n7-n66-n78**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Discussion:**

**Decision: Endorsed.**

**R4-2010529 TP to TR 38.717-03-02: CA\_n5-n25-n66**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.0  
 Source: Nokia, Bell Mobility*

**Discussion:**

**Decision: Revised to R4-2011677 (from R4-2010529).**

**R4-2011677 TP to TR 38.717-03-02: CA\_n5-n25-n66**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.0  
 Source: Nokia, Bell Mobility*

**Discussion:**

**Decision: Return to.**

**R4-2010531 TP to TR 38.717-03-02: CA\_n5-n25-n78**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.0  
 Source: Nokia, Bell Mobility*

**Discussion:**

**Decision: Approved.**

**R4-2010580 TP for CA 3DL2UL n1-n77-n79 for TR 38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Withdrawn.**

**R4-2010588 TP for CA 3DL2UL n1-n78-n79 for TR 38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

**Decision: Withdrawn.**

**R4-2010644 TP for TR38.717-03-02\_CA\_n39A-n40A-n79A**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.1  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Approved.**

**R4-2010645 TP for TR38.717-03-02\_CA\_n39A-n40A-n41A**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.1  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Approved.**

**R4-2009690 TP for CA\_n1-n77-n257 3UL/2DL for TR38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

**Decision: Approved.**

**R4-2009691 TP for CA\_n1-n78-n257 3UL/2DL for TR38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

**Decision: Approved.**

**R4-2009692 TP for CA\_n1-n79-n257 3UL/2DL for TR38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

**Decision: Approved.**

**R4-2009693 TP for CA\_n77-n79-n257 3UL/2DL for TR38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

**Decision: Approved.**

**R4-2009694 TP for CA\_n78-n79-n257 3UL/2DL for TR38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

**Decision: Approved.**

### 10.12 DC of x bands (x=1,2) LTE inter-band CA (xDL/xUL) and y bands (y=3-x) NR inter-band CA [DC\_R17\_xBLTE\_yBNR\_3DL3UL]

#### 10.12.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_xBLTE\_yBNR\_3DL3UL-Core/Per]

**R4-2010656 Revised WID on Rel-17 Dual Connectivity (DC) x bands (x=1,2) LTE inter-band CA (xDL/xUL) and y bands (y=3-x) NR inter-band CA**

*Type: WID revised For: Information  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010657 Draft CR to reflect the completed ENDC combinations for 3 bands DL with 3 bands UL into TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010658 TR 37.717-33 v0.0.1**

*Type: draft TR For: Agreement  
 37.717-33 v0.0.1  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Agreed.**

**R4-2010659 TR 37.717-33 v0.1.0**

*Type: draft TR For: Agreement  
 37.717-33 v0.0.1  
 Source: ZTE Corporation*

**Discussion:**

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

#### 10.12.2 UE RF [DC\_R17\_xBLTE\_yBNR\_3DL3UL-Core]

**R4-2010646 TP for TR 37.717-33\_DC\_41A\_n79A-n258A**

*Type: pCR For: Approval  
 37.717-33 v0.0.1  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Approved.**

### 10.13 DC of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and 3 bands NR inter-band CA (3DL/1UL) [DC\_R17\_xBLTE\_3BNR\_yDL2UL]

#### 10.13.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_xBLTE\_3BNR\_yDL2UL -Core/Per]

**R4-2010660 Revised WID on Rel-17 Dual Connectivity (DC) of x bands (x=1,2,3) LTE inter-band CA (xDL1UL) and 3 bands NR inter-band CA (3DL1UL)**

*Type: WID revised For: Information  
 Source: ZTE Corporation*

**Discussion:**

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

**R4-2010661 TR 37.717-11-31\_v0.0.1**

*Type: draft TR For: Agreement  
 37.717-11-31 v0.0.1  
 Source: ZTE Corporation*

**Discussion:**

**Decision: Agreed.**

**R4-2010662 TR 37.717-11-31\_v0.1.0**

*Type: draft TR For: Agreement  
 37.717-11-31 v0.0.1  
 Source: ZTE Corporation*

**Discussion:**

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

#### 10.13.2 UE RF [DC\_R17\_xBLTE\_3BNR\_yDL2UL-Core]

### 10.14 NR inter-band Carrier Aggregation and Dual connectivity for DL 4 bands and 2UL bands [NR\_CADC\_R17\_4BDL\_2BUL]

#### 10.14.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_4BDL\_2BUL -Core/Per]

**R4-2010143 Revised WID on NR CA/DC with 4DL/2UL**

*Type: WID revised For: Information  
 Source: Samsung*

**Discussion:**

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

**R4-2010144 Draft CR on introduction for completed NR CA/DC combs with 4DL/2UL within FR1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Samsung*

**Discussion:**

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

**R4-2010145 Draft CR on introduction for completed NR CA/DC combs with 4DL/2UL including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v16.4.0  
 Source: Samsung*

**Discussion:**

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

**R4-2010222 skeleton on TR38.717-04-02 for NR CA/DC with 4DL/2UL**

*Type: draft TR For: Agreement  
 38.717-04-02 v0.0.1  
 Source: Samsung*

**Discussion:**

**Decision: Agreed.**

#### 10.14.2 UE RF [NR\_CADC\_R17\_4BDL\_2BUL -Core]

**R4-2010255 TP for TR 38.717-04-02 CA\_n3-n28-n77-n257 and DC\_n3-n28-n77-n257**

*Type: pCR For: Approval  
 38.717-04-02 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Approved.**

**R4-2010256 TP for TR 38.717-04-02 CA\_n3-n28-n78-n257 and DC\_n3-n28-n78-n257**

*Type: pCR For: Approval  
 38.717-04-02 v0.0.1  
 Source: Samsung, KDDI*

**Discussion:**

**Decision: Approved.**

### 10.15 NR inter-band CA for 5 bands DL with x bands UL (x=1, 2) [NR\_CADC\_R17\_5BDL\_xBUL\_3DL3UL]

#### 10.15.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_5BDL\_xBUL -Core/Per]

**R4-2011227 Revised WID on NR inter-band CA for 5 bands DL with x bands UL (x=1, 2)**

*Type: WID revised For: Information  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2011228 TR 38.717-05-01 v0.0.1**

*Type: draft TR For: Agreement  
 38.717-05-01 v0.0.1  
 Source: Huawei, HiSilicon*

**Abstract:**

TR skeleton

**Discussion:**

**Decision: Agreed.**

**R4-2011229 TR 38.717-05-01 v0.1.0**

*Type: draft TR For: Agreement  
 38.717-05-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To capture the approved TPs in this meeting

**Discussion:**

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

**R4-2011230 Draft CR on Introduction of completed 5 bands inter-band CA into TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

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

#### 10.15.2 UE RF [NR\_CADC\_R17\_5BDL\_xBUL -Core]

### 10.16 Power Class 2 UE for NR inter-band CA and SUL configurations with 2 bands UL [NR\_SAR\_PC2\_interB\_SUL\_2BUL]

**R4-2011561           Email discussion summary for [96e][128] NR\_SAR\_PC2\_interB\_SUL\_2BUL**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Discussion:**

.

**Decision: Revised to R4-2011866 (from R4-2011561).**

**R4-2011866           Email discussion summary for [96e][128] NR\_SAR\_PC2\_interB\_SUL\_2BUL**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Discussion:**

.

**Decision: Return to.**

**R4-2011789           WF on UE PC2 for NR inter-band CA and SUL configurations**

*Type: others For: Approval*

*Source: China Telecom*

**Discussion:**

.

**Decision:                    Return to.**

#### 10.16.1 Rapporteur Input (WID/TR/CR) [NR\_SAR\_PC2\_interB\_SUL\_2BUL-Core/Per]

**R4-2010266 Revised WID: SAR schemes for UE power class 2 (PC2) for NR inter-band Carrier Aggregation and supplemental uplink (SUL) configurations with 2 bands UL**

*Type: WID revised For: Information  
 Source: China Telecom*

**Abstract:**

This revised WI is to focus on SAR scheme rather than band-combination reqirements according to MCC suggestion. The band-combination requirements will be captured in a new basket WI submitted in AI 17.2.1

**Discussion:**

**Decision: Noted.**

**R4-2010268 Discussion on RAN procedure rules for UE power class 2 (PC2) WID**

*Type: other For: Approval  
 Source: China Telecom*

**Abstract:**

This contribution discusses how to split the CA&SUL PC2 WI RP-201337 according to MCC suggestion.

**Discussion:**

**Decision: Noted.**

**R4-2010269 Work plan for SAR schemes for UE power class 2 NR inter-band CA and SUL with 2UL**

*Type: Work Plan For: Approval  
 Source: China Telecom*

**Discussion:**

**Decision: Approved.**

#### 10.16.2 PC2 for inter-band CA [NR\_SAR\_PC2\_interB\_SUL\_2BUL-Core]

**R4-2010270 Discussion on SAR schemes for UE power class 2 NR inter-band CA with 2UL**

*Type: other For: Approval  
 Source: China Telecom*

**Discussion:**

**Decision: Noted.**

**R4-2010634 Discussion on PC2 inter-band NR CA**

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

**Discussion:**

**Decision: Noted.**

**R4-2009796 Discussion on SAR solution for interband PC2 2UL CA**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

#### 10.16.3 PC2 for SUL [NR\_SAR\_PC2\_interB\_SUL\_2BUL-Core]

**R4-2010546 Discussion on the SUL band combination PC2 SAR compliance**

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

**Discussion:**

**Decision: Noted.**

**R4-2010773 Discussion on SUL HPUE SAR**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

**Decision: Noted.**

**R4-2009797 Discussion on SAR solution for SUL PC2**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

### 10.17 Adding channel bandwidth support to existing NR bands [NR\_BW\_Bands]

**R4-2011562           Email discussion summary for [96e][129] NR\_bands\_R17\_BWs**

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

**Discussion:**

.

**Decision: Revised to R4-2011867 (from R4-2011562).**

**R4-2011867           Email discussion summary for [96e][129] NR\_bands\_R17\_BWs**

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

**Discussion:**

.

**Decision: Return to.**

#### 10.17.1 General and Rapporteur Input (WID/TR/CR) [NR\_BW\_Bands -Core/Per]

**R4-2010440 Way of working - New basket WI adding channel BW to existing NR bands**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution reminds the agreed way of working with this new basket WI and could be use to answer any related question

**Discussion:**

**Decision: Noted.**

**R4-2010545 Further on adding bandwidths for NR bands**

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

**Discussion:**

The following two proposals are agreed:

* **Proposal 1: Supported channel bandwidths for SUL bands needs to be complete by adding the missing ones in Rel-17 bandwidth addition basket work item.**
* **Proposal 2: RAN4 seeks to specify 90MHz and 100MHz UE channel bandwidth for n40 as optional channel bandwidths.**

**Decision: Noted.**

**R4-2010618 Revised RP-201294 - Basket WID on adding channel bandwidth support to existing NR bands**

*Type: WID revised For: Information  
 Source: Ericsson*

**Abstract:**

This contribution is the revision of RP-201294 to include the new requests received before RAN4#96e meeting

**Discussion:**

**Decision: Revised to R4-2011790 (from R4-2010618).**

**R4-2011790 Revised RP-201294 - Basket WID on adding channel bandwidth support to existing NR bands**

*Type: WID revised For: Information  
 Source: Ericsson*

**Abstract:**

This contribution is the revision of RP-201294 to include the new requests received before RAN4#96e meeting

**Discussion:**

**Decision: Return to.**

#### 10.17.2 UE RF requirement [NR\_BW\_Bands -Core]

**R4-2010524 Including 70 MHz UE RF requirement to band n41 and n48**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

draft CR to add 70 MHz to n41 and n48

**Discussion:**

**Decision: Endorsed.**

**R4-2010540 Discussion on the addition of BWs for band n83 and n84**

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

**Discussion:**

**Decision: Noted.**

**R4-2010541 draftCR to 38101-1 to add 30MHz BW for band n83**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010543 draftCR to 38101-1 to add 25, 30, 40, 50MHz BW for band n84**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

##### 10.17.2.1 Reference sensitivity [NR\_BW\_Bands -Core]

##### 10.17.2.2 MPR/A-MPR/NS signaling [NR\_BW\_Bands -Core]

##### 10.17.2.3 others [NR\_BW\_Bands -Core]

**R4-2010441 Bands n41 and n48 - Add 70MH CBW**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Thiis tdoc explains the needed changes to add support for 70MHz CBW in bands n41 and n48

**Discussion:**

**Decision: Noted.**

**R4-2010442 Draft CR to 38.101-1 - Band n41 - Add 70MHz CBW**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Ericsson*

**Abstract:**

This draft CR is implemeting 70MHz CBW support to band n41 in TS 38.101-1

**Discussion:**

**Decision: Not pursued.**

**R4-2010443 Draft CR to 38.101-1 - Band n48 - Add 70MHz CBW**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Ericsson*

**Abstract:**

This draft CR is implemeting 70MHz CBW support to band n48 in TS 38.101-1

**Discussion:**

**Decision: Not pursued.**

**R4-2010777 Adding New CBW to existing NR bands**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

**Decision: Noted.**

#### 10.17.3 BS RF requirement [NR\_BW\_Bands -Core]

**R4-2010444 Draft CR to 38.104 - Band n48 - Add 70MHz CBW**

*Type: draftCR For: Endorsement  
 38.104 v16.4.0  
 Source: Ericsson*

**Abstract:**

This draft CR is implemeting 70MHz CBW support to band n48 in TS 38.104

**Discussion:**

**Decision: Not pursued.**

**R4-2010525 Including 70 MHz B RF requirement to band n48**

*Type: draftCR For: Endorsement  
 38.104 v16.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

draft CR to add 70 MHz to n48

**Discussion:**

**Decision: Endorsed.**

**R4-2010542 draftCR to 38104 to add 30MHz BW for band n83**

*Type: draftCR For: Endorsement  
 38.104 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010544 draftCR to 38104 to add 25, 30, 40, 50MHz BW for band n84**

*Type: draftCR For: Endorsement  
 38.104 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

### 10.18 Introduction of channel bandwidths 35MHz and 45MHz for NR [NR\_FR1\_35MHz\_45MHz\_BW]

**R4-2011563           Email discussion summary for [96e][130] NR\_FR1\_35MHz\_45MHz\_BW**

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

**Discussion:**

.

**Decision: Revised to R4-2011868 (from R4-2011563).**

**R4-2011868           Email discussion summary for [96e][130] NR\_FR1\_35MHz\_45MHz\_BW**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011791           WF on release independence and signalling for 35 MHz and 45 MHz**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011792           WF on Spectrum utilization for 35 MHz and 45 MHz**

*Type: others For: Approval*

*Source: ZTE*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011793           WF on UE RF requirements**

*Type: others For: Approval*

*Source: Skyworks*

**Discussion:**

.

**Decision:                    Return to.**

#### 10.18.1 General and Rapporteur Input (WID/TR/CR) [NR\_FR1\_35MHz\_45MHz\_BW-Core/Per]

**R4-2010501 Work plan on introduction of channel bandwidths 35MHz and 45MHz**

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

**Discussion:**

**Decision: Approved.**

**R4-2010502 WID revision on introduction of channel bandwidths 35MHz and 45MHz**

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

**Discussion:**

**Decision: Noted.**

#### 10.18.2 Spectrum utilization [NR\_FR1\_35MHz\_45MHz\_BW-Core]

**R4-2010265 Spectrum Utilization for 35MHz and 45MHz Channels in FR1 and their Support**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we provide our input on spectrum utilization and support of these new 35 and 45MHz channel bandwidths.

**Discussion:**

**Decision: Noted.**

**R4-2010503 Spectrum utilization for 35MHz and 45MHz**

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

**Discussion:**

**Decision: Noted.**

**R4-2010635 On spectrum utilization for new channel bandwidth of 35MHz and 45MHz**

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

**Discussion:**

**Decision: Noted.**

#### 10.18.3 UE RF requirements [NR\_FR1\_35MHz\_45MHz\_BW-Core]

**R4-2010241 UE Requirements for 35MHz and 45MHz channels in FR1**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we provide our input on UE requirements based on our proposed spectrum utilization for 35 and 45 MHz CH BW

**Discussion:**

**Decision: Noted.**

**R4-2010504 Overview on introduction of channel bandwidths 35MHz and 45MHz for UE**

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

**Discussion:**

**Decision: Noted.**

**R4-2010636 Discussion on UE RF requirement for new channel bandwidth of 35MHz and 45MHz**

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

**Discussion:**

**Decision: Noted.**

#### 10.18.4 BS RF requirements [NR\_FR1\_35MHz\_45MHz\_BW-Core]

**R4-2010505 Overview on introduction of channel bandwidths 35MHz and 45MHz for BS**

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

**Discussion:**

**Decision: Noted.**

**R4-2010948 Discussion on BS RF requirement for new channel bandwidth of 35MHz and 45MHz**

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

**Discussion:**

**Decision: Noted.**

#### 10.18.5 Others [NR\_FR1\_35MHz\_45MHz\_BW-Core]

**R4-2010947 Discussion on signalling for brand new channel bandwidth**

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

**Discussion:**

**Decision: Noted.**

### 10.19 Band combinations for Uu and V2X con-current operation [NR\_LTE\_V2X\_PC5\_combos]

**R4-2011564           Email discussion summary for [96e][131] NR\_LTE\_V2X\_PC5\_combos**

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

**Discussion:**

.

**Decision: Revised to R4-2011869 (from R4-2011564).**

**R4-2011869           Email discussion summary for [96e][131] NR\_LTE\_V2X\_PC5\_combos**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011794           WF on new band combinations for V2X con-current operation**

*Type: others For: Approval*

*Source: CATT*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011797           CR for 38.101-1, Introduce new band combination of V2X\_n39A\_n47A**

*Type: CR For: Agreement  
 38.101-1 CR- Cat:*

*Source: CATT*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011798           CR for 38.101-3, Introduce new band combination of V2X\_39A\_n47A and V2X\_n39A\_47A**

*Type: CR For: Agreement  
 38.101-3 CR- Cat:*

*Source: CATT*

**Discussion:**

.

**Decision:                    Return to.**

#### 10.19.1 General and Rapporteur Input (WID/TR/CR) [NR\_LTE\_V2X\_PC5\_combos-Core/Per]

**R4-2010931 General discussion about Rel-17 band combinations for Uu and V2X con-current operation**

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

**Discussion:**

**Decision: Noted.**

**R4-2009832 Revised basket WID for V2X band combination**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Endorsed.**

**R4-2009833 TR 37 8xx skeleton for V2X new band combinations**

*Type: WID revised For: Information  
 Source: CATT*

**Discussion:**

**Decision: Revised to R4-2011795 (from R4-2009833).**

**R4-2011795 TR 37 8xx skeleton for V2X new band combinations**

*Type: WID revised For: Information  
 Source: CATT*

**Discussion:**

Chair: please provide correct tdoc info as this is a TR skeleton

**Decision: Return to.**

#### 10.19.2 UE RF requirement for concurrent operation between NR Uu band and NR PC5 band [NR\_LTE\_V2X\_PC5\_combos-Core]

**R4-2009834 TP on harmonics and IMD analysis for V2X\_(n)39A\_(n)47A con-current operation**

*Type: other For: Approval  
 Source: CATT*

**Discussion:**

**Decision: Revised to R4-2011796 (from R4-2009834).**

**R4-2011796 TP on harmonics and IMD analysis for V2X\_(n)39A\_(n)47A con-current operation**

*Type: other For: Approval  
 Source: CATT*

**Discussion:**

**Decision: Return to.**

#### 10.19.3 UE RF requirement for concurrent operation between LTE Uu band and NR PC5 band [NR\_LTE\_V2X\_PC5\_combos-Core]

#### 10.19.4 UE RF requirement for concurrent operation between NR Uu band and LTE PC5 band [NR\_LTE\_V2X\_PC5\_combos-Core]

#### 10.19.5 UE RF requirement for concurrent operation of LTE/NR CA/DC band combinations + PC5 V2X [NR\_LTE\_V2X\_PC5\_combos-Core]

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

#### 10.20.1 UE RF (38.101-2) [NR\_FR2\_FWA\_Bn257\_Bn258-Core]

**R4-2011565           Email discussion summary for [96e][132] NR\_FR2\_FWA\_Bn257\_Bn258**

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

**Discussion:**

.

**Decision: Revised to R4-2011870 (from R4-2011565).**

**R4-2011870           Email discussion summary for [96e][132] NR\_FR2\_FWA\_Bn257\_Bn258**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011799           draft CR for FR2 FWA RF requirements**

*Type: draftCR For: Endorsement  
 38.101-2  
 Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011800           LS to RAN2 on FR2 FWA options**

*Type: LS out For: Approval*

*Source: SoftBank*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010533 Open issues on FR2 FWA UE RF requirement**

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

**Abstract:**

hihger MBR and MPR than PC3 is not recommended.

**Discussion:**

**Decision: Noted.**

**R4-2011417 Views on RF requirement for FWA**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Discussion:**

**Decision: Noted.**

**R4-2011458 On Japan FWA EIRP requirement**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

Network simulation suggest UL tput strongly limited by UL EIRP

**Discussion:**

**Decision: Noted.**

**R4-2011488 on new FR2 FWA UE RF requirement+LS RAN2**

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

**Discussion:**

**Decision: Noted.**

**R4-2009561 Views on RF requirement for FWA**

*Type: other For: Discussion  
 Source: Sony*

**Discussion:**

**Decision: Noted.**

**R4-2009629 Views on FR2 FWA UE with maximum TRP of 23dBm**

*Type: discussion For: Approval  
 Source: MediaTek Beijing Inc.*

**Abstract:**

Proposal1: Define power class 5 for FR2 FWA UE with maximum TRP of 23dBm.

Proposal2: Peak EIRP is 26 dBm for FR2 FWA UE with maximum TRP of 23dBm.

Proposal3: REFSENS for 50MHz channel BW is -90.5 dBm for FR2 FWA UE with maximum TRP of 23dBm.

Proposal4: “A

**Discussion:**

**Decision: Noted.**

**R4-2009706 Views on new power class for FWA UE**

*Type: discussion For: Approval  
 Source: Samsung*

**Discussion:**

**Decision: Noted.**

#### 10.20.4 Others [NR\_FR2\_FWA\_Bn257\_Bn258-Core/Perf]

### 10.21 Introduction of NR band n13 [NR\_n13]

**R4-2011566           Email discussion summary for [96e][133] NR\_n13**

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

**Discussion:**

.

**Decision: Revised to R4-2011871 (from R4-2011566).**

**R4-2011871           Email discussion summary for [96e][133] NR\_n13**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011801           WF on A-MPR for n13**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

#### 10.21.1 UE RF (38.101-1) [NR\_n13-Core]

**R4-2010490 A-MPR for n13**

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

**Discussion:**

**Decision: Noted.**

**R4-2010491 Draft CR to TS 38.101-1: introduction of NR band n13**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011802 (from R4-2010491).**

**R4-2011802 Draft CR to TS 38.101-1: introduction of NR band n13**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

#### 10.21.2 BS RF (38.104) [NR\_n13-Core]

#### 10.21.3 RRM (38.133) [NR\_n13-Core]

#### 10.21.4 Others [NR\_n13-Core/Perf]

### 10.22 Introduction of 1880-1920MHz SUL band for NR [NR\_SUL\_band\_1880\_1920MHz]

**R4-2011567           Email discussion summary for [96e][134] NR\_SUL\_bands**

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

**Discussion:**

.

**Decision: Revised to R4-2011872 (from R4-2011567).**

**R4-2011872           Email discussion summary for [96e][134] NR\_SUL\_bands**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2010151 Discussion on the new SUL band for 1880MHz - 1920MHz**

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

**Discussion:**

**Decision: Noted.**

**R4-2009632 CR to 38101-1 on introducing new SUL band n96**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0413 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

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

#### 10.22.1 UE RF (38.101-1) [NR\_SUL\_band\_1880\_1920MHz-Core]

**R4-2010152 draftCR to 38101-1 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2009633 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0414 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011803 (from R4-2009633).**

**R4-2011803 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0414 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

#### 10.22.2 BS RF (38.104) [NR\_SUL\_band\_1880\_1920MHz -Core]

**R4-2010153 draftCR to 38104 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 38.104 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010154 draftCR to 38141-1 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 38.141-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010155 draftCR to 38141-2 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 38.141-2 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010156 draftCR to 36104 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 36.104 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010157 draftCR to 36141 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 36.141 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010158 draftCR to 37104 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 37.104 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010159 draftCR to 37141 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 37.141 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010160 draftCR to 37105 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 37.105 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010161 draftCR to 37145-1 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 37.145-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010162 draftCR to 37145-2 on introducing new SUL band n96**

*Type: draftCR For: Endorsement  
 37.145-2 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2009634 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.4.0 CR-0215 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011804 (from R4-2009634).**

**R4-2011804 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.4.0 CR-0215 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009635 Introduction of 1880-1920MHz SUL band into Rel-17 TS 36.104**

*Type: CR For: Agreement  
 36.104 v16.6.0 CR-4903 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011805 (from R4-2009635).**

**R4-2011805 Introduction of 1880-1920MHz SUL band into Rel-17 TS 36.104**

*Type: CR For: Agreement  
 36.104 v16.6.0 CR-4903 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009636 Introduction of 1880-1920MHz SUL band into Rel-17 TS 36.141**

*Type: CR For: Agreement  
 36.141 v16.6.0 CR-1267 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011806 (from R4-2009636).**

**R4-2011806 Introduction of 1880-1920MHz SUL band into Rel-17 TS 36.141**

*Type: CR For: Agreement  
 36.141 v16.6.0 CR-1267 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009637 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.104**

*Type: CR For: Agreement  
 37.104 v16.6.0 CR-0904 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011807 (from R4-2009637).**

**R4-2011807 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.104**

*Type: CR For: Agreement  
 37.104 v16.6.0 CR-0904 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009638 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.105**

*Type: CR For: Agreement  
 37.105 v16.4.0 CR-0185 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011808 (from R4-2009638).**

**R4-2011808 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.105**

*Type: CR For: Agreement  
 37.105 v16.4.0 CR-0185 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009639 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.141**

*Type: CR For: Agreement  
 37.141 v16.6.0 CR-0941 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011809 (from R4-2009639).**

**R4-2011809 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.141**

*Type: CR For: Agreement  
 37.141 v16.6.0 CR-0941 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009640 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.145-1**

*Type: CR For: Agreement  
 37.145-1 v16.4.0 CR-0214 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011810 (from R4-2009640).**

**R4-2011810 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.145-1**

*Type: CR For: Agreement  
 37.145-1 v16.4.0 CR-0214 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009641 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.145-2**

*Type: CR For: Agreement  
 37.145-2 v16.4.0 CR-0233 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011811 (from R4-2009641).**

**R4-2011811 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.145-2**

*Type: CR For: Agreement  
 37.145-2 v16.4.0 CR-0233 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009642 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.141-1**

*Type: CR For: Agreement  
 38.141-1 v16.4.0 CR-0139 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011812 (from R4-2009642).**

**R4-2011812 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.141-1**

*Type: CR For: Agreement  
 38.141-1 v16.4.0 CR-0139 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009643 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.141-2**

*Type: CR For: Agreement  
 38.141-2 v16.4.0 CR-0199 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011813 (from R4-2009643).**

**R4-2011813 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.141-2**

*Type: CR For: Agreement  
 38.141-2 v16.4.0 CR-0199 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

#### 10.22.3 RRM (38.133) [NR\_SUL\_band\_1880\_1920MHz -Core]

#### 10.22.4 Others [NR\_SUL\_band\_1880\_1920MHz -Core/Perf]

### 10.23 Introduction of 2300-2400MHz SUL band for NR [NR\_SUL\_band\_2300\_2400MHz]

**R4-2010163 Discussion on the new SUL band for 2300MHz - 2400MHz**

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

**Discussion:**

**Decision: Noted.**

#### 10.23.1 UE RF (38.101-1) [NR\_SUL\_band\_2300\_2400MHz -Core]

**R4-2010164 draftCR to 38101-1 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 38.101-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2009644 Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0415 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011814 (from R4-2009644).**

**R4-2011814 Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0415 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

#### 10.23.2 BS RF (38.104) [NR\_SUL\_band\_2300\_2400MHz -Core]

**R4-2010165 draftCR to 38104 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 38.104 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010166 draftCR to 38141-1 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 38.141-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010167 draftCR to 38141-2 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 38.141-2 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010168 draftCR to 36104 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 36.104 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010169 draftCR to 36141 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 36.141 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010170 draftCR to 37104 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 37.104 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010171 draftCR to 37141 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 37.141 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010172 draftCR to 37105 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 37.105 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010173 draftCR to 37145-1 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 37.145-1 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2010174 draftCR to 37145-2 on introducing new SUL band n97**

*Type: draftCR For: Endorsement  
 37.145-2 v16.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Not pursued.**

**R4-2009645 Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.4.0 CR-0216 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Revised to R4-2011815 (from R4-2009645).**

**R4-2011815 Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.4.0 CR-0216 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009646 Introduction of 2300-2400MHz SUL band into Rel-17 TS 36.104**

*Type: CR For: Agreement  
 36.104 v16.6.0 CR-4904 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

Chair: the CR is agreeable based on first round discussion. Decision deferred to agree all CRs in a package

**Decision: Return to.**

**R4-2009647 Introduction of 2300-2400MHz SUL band into Rel-17 TS 36.141**

*Type: CR For: Agreement  
 36.141 v16.6.0 CR-1268 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009648 Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.104**

*Type: CR For: Agreement  
 37.104 v16.6.0 CR-0905 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009649 Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.105**

*Type: CR For: Agreement  
 37.105 v16.4.0 CR-0186 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009650 Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.141**

*Type: CR For: Agreement  
 37.141 v16.6.0 CR-0942 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009651 Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.145-1**

*Type: CR For: Agreement  
 37.145-1 v16.4.0 CR-0215 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009652 Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.145-2**

*Type: CR For: Agreement  
 37.145-2 v16.4.0 CR-0234 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009653 Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.141-1**

*Type: CR For: Agreement  
 38.141-1 v16.4.0 CR-0140 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

**R4-2009654 Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.141-2**

*Type: CR For: Agreement  
 38.141-2 v16.4.0 CR-0200 Cat: B (Rel-17)  
  
 Source: CMCC*

**Discussion:**

**Decision: Return to.**

#### 10.23.3 RRM (38.133) [NR\_SUL\_band\_2300\_2400MHz -Core]

#### 10.23.4 Others [NR\_SUL\_band\_2300\_2400MHz -Core/Perf]

### 10.24 Introduction of NR 47 GHz band [NR\_47GHz\_Band]

**R4-2011568           Email discussion summary for [96e][135] NR\_47GHz\_Band**

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

**Discussion:**

.

**Decision: Revised to R4-2011873 (from R4-2011568).**

**R4-2011873           Email discussion summary for [96e][135] NR\_47GHz\_Band**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011816           WF on UE testability above 43.5 GHz**

*Type: others For: Approval*

*Source: R&S, Apple*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011817           WF on link budget parameters for Tx/Rx of n262**

*Type: others For: Approval*

*Source: Huawei, HiSilicon, Apple*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011818           WF on UE RF requirement for 47 GHz band**

*Type: others For: Approval*

*Source: Qualcomm*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010520 Workplan for Introduction of NR 47 GHz band**

*Type: Work Plan For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

work plan from rapporteur

**Discussion:**

**Decision: Approved.**

**R4-2010521 Regulatory Background of 47 GHz band**

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

**Abstract:**

spectrum allocation and FCC rules are summarized

**Discussion:**

**Decision: Noted.**

#### 10.24.1 UE RF (38.101-2) [NR\_47GHz\_Band -Core]

**R4-2010523 UE RF requirements for 47 GHz band**

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

**Abstract:**

summary of UE RF requirement.

**Discussion:**

**Decision: Noted.**

**R4-2011455 Discussion on 48G RF components**

*Type: other For: Discussion  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

PA, LNA and antenna gain trends in existing FR2 bands

**Discussion:**

**Decision: Noted.**

**R4-2009957 Preliminary views on the new 47 GHz band**

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

**Discussion:**

**Decision: Noted.**

#### 10.24.2 BS RF (38.104) [NR\_47GHz\_Band -Core]

**R4-2010446 Requirement overview for 47 GHz frequency band**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution gives an overview of the requirements impact when specifying the new 47GHz band

**Discussion:**

**Decision: Noted.**

**R4-2011412 BS RF requirements for 47 GHz band**

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

**Discussion:**

**Decision: Noted.**

#### 10.24.3 RRM (38.133) [NR\_47GHz\_Band -Core]

**R4-2010522 Band number and System parameters of 47 GHz band**

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

**Abstract:**

n262 is proposed. System parameters are summarized

**Discussion:**

**Decision: Approved.**

#### 10.24.4 Others [NR\_47GHz\_Band -Core/Perf]

**R4-2010445 TR 38xxx Introduction of NR Band 26x (47Ghz band)**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

TR skeleton to capture the work done when specifying the new NR FR2 47GHz band

**Discussion:**

**Decision: Agreed.**

**R4-2010447 47GHz band - Regulatory overview - System parameters**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is giving an overview of Regulatory situation for the 47GHZ band and is proposing system parameters for this new band

**Discussion:**

**Decision: Approved.**

### 10.25 Introduction of NR band n24 [NR\_band\_n24]

**R4-2011569           Email discussion summary for [96e][136] NR\_LTE\_band\_n24**

*Type: other For: Information  
 Source: Moderator (Ligado Networks)*

**Discussion:**

.

**Decision: Revised to R4-2011874 (from R4-2011569).**

**R4-2011874           Email discussion summary for [96e][136] NR\_LTE\_band\_n24**

*Type: other For: Information  
 Source: Moderator (Ligado Networks)*

**Discussion:**

.

**Decision: Return to.**

**R4-2011819           WF on CR work split**

*Type: others For: Approval*

*Source: Ligado Networks*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011820           WF on UE related work for n24**

*Type: others For: Approval*

*Source: Ligado Networks*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011821           WF on UE related work for Modification of Band 24**

*Type: others For: Approval*

*Source: Ligado Networks*

**Discussion:**

.

**Decision:                    Return to.**

#### 10.25.1 UE RF (38.101-1) [NR\_band\_n24-Core]

**R4-2010721 System Parameters for n24 and discussion related to regulatory emission limits for UE**

*Type: discussion For: Approval  
 Source: Ligado Networks*

**Discussion:**

**Decision: Approved.**

#### 10.25.2 BS RF (38.104) [NR\_band\_n24-Core]

**R4-2010728 Review of FCC material on record in dockets 12-340, 11-109 regarding band 24 downlink**

*Type: discussion For: Approval  
 Source: Ligado Networks*

**Discussion:**

**Decision: Noted.**

#### 10.25.3 RRM (38.133) [NR\_band\_n24-Core]

#### 10.25.4 Others [NR\_band\_n24-Core/Perf]

**R4-2010717 Work plan for Introduction of NR band n24**

*Type: Work Plan For: Approval  
 Source: Ligado Networks*

**Discussion:**

**Decision: Approved.**

**R4-2011508 Initial considerations on band n24 impact on E911 emergency calls**

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

**Discussion:**

**Decision: Noted.**

### 10.26 Introduction of 1.6 GHz NR SUL band with same uplink frequency range of Band 24 [NR\_SUL\_UL\_n24]

**R4-2011570           Email discussion summary for [96e][137] NR\_SUL\_bands\_1.6GHz**

*Type: other For: Information  
 Source: Moderator (Ligado Networks)*

**Discussion:**

.

**Decision: Revised to R4-2011875 (from R4-2011570).**

**R4-2011875           Email discussion summary for [96e][137] NR\_SUL\_bands\_1.6GHz**

*Type: other For: Information  
 Source: Moderator (Ligado Networks)*

**Discussion:**

.

**Decision: Return to.**

#### 10.26.1 UE RF (38.101-1) [NR\_SUL\_UL\_n24-Core]

**R4-2010746 System Parameters for new SUL Band and discussion related to regulatory emission limits related to UE**

*Type: discussion For: Approval  
 Source: Ligado Networks*

**Discussion:**

**Decision: Approved.**

#### 10.26.2 BS RF (38.104) [NR\_SUL\_UL\_n24-Core]

#### 10.26.3 RRM (38.133) [NR\_SUL\_UL\_n24-Core]

#### 10.26.4 Others [NR\_SUL\_UL\_n24-Core/Perf]

**R4-2010745 Work plan for Introduction of 1.6 GHz NR SUL Band with same uplink frequency range of Band 24**

*Type: Work Plan For: Approval  
 Source: Ligado Networks*

**Discussion:**

**Decision: Approved.**

### 10.27 LTE/NR spectrum sharing in Band 40/n40 [NR\_n40\_LTE\_40\_coex-Core]

**R4-2011571           Email discussion summary for [96e][138] DSS\_bands**

*Type: other For: Information  
 Source: Moderator (Reliance Jio)*

**Discussion:**

.

**Decision: Revised to R4-2011876 (from R4-2011571).**

**R4-2011876           Email discussion summary for [96e][138] DSS\_bands**

*Type: other For: Information  
 Source: Moderator (Reliance Jio)*

**Discussion:**

.

**Decision: Return to.**

#### 10.27.1 General [NR\_n40\_LTE\_40\_coex-Core]

**R4-2010274 Discussion the test model in DSS**

*Type: discussion For: Discussion  
 Source: Samsung*

**Discussion:**

**Decision: Noted.**

**R4-2009591 CR to TS38.307 : LTE/NR spectrum sharing band 40 / n40**

*Type: CR For: Approval  
 38.307 v16.3.0 CR-0024 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

**Abstract:**

CR to TS38.307 : LTE/NR spectrum sharing band 40 / n40

**Discussion:**

**Decision: Revised to R4-2011824 (from R4-2009591).**

**R4-2011824 CR to TS38.307 : LTE/NR spectrum sharing band 40 / n40**

*Type: CR For: Approval  
 38.307 v16.3.0 CR-0024 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

**Abstract:**

CR to TS38.307 : LTE/NR spectrum sharing band 40 / n40

**Discussion:**

**Decision: Return to.**

**R4-2009944 Enabling LTE/NR spectrum sharing with 4-port LTE transmissions**

*Type: discussion For: Decision  
 Source: Apple Inc, Reliance Jio*

**Discussion:**

**Decision: Noted.**

#### 10.27.2 UL shift [NR\_n40\_LTE\_40\_coex-Core]

**R4-2010752 UL shift for LTE/NR spectrum sharing in Band 40/n40**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

**Decision: Noted.**

**R4-2009589 CR to TS 38.101-1: LTE/NR spectrum sharing band40/n40**

*Type: CR For: Approval  
 38.101-1 v16.4.0 CR-0408 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

**Abstract:**

CR to TS 38.101-1: LTE/NR spectrum sharing band40/n40

**Discussion:**

**Decision: Revised to R4-2011822 (from R4-2009589).**

**R4-2011822 CR to TS 38.101-1: LTE/NR spectrum sharing band40/n40**

*Type: CR For: Approval  
 38.101-1 v16.4.0 CR-0408 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

**Abstract:**

CR to TS 38.101-1: LTE/NR spectrum sharing band40/n40

**Discussion:**

**Decision: Return to.**

**R4-2009590 CR to TS38.104 : LTE/NR spectrum sharing band 40 / n40**

*Type: CR For: Approval  
 38.104 v16.4.0 CR-0214 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

**Abstract:**

CR to TS38.104 : LTE/NR spectrum sharing band 40 / n40

**Discussion:**

**Decision: Revised to R4-2011823 (from R4-2009590).**

**R4-2011823 CR to TS38.104 : LTE/NR spectrum sharing band 40 / n40**

*Type: CR For: Approval  
 38.104 v16.4.0 CR-0214 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

**Abstract:**

CR to TS38.104 : LTE/NR spectrum sharing band 40 / n40

**Discussion:**

**Decision: Return to.**

### 10.28 LTE/NR spectrum sharing in Band 38/n38 [NR\_n38\_LTE\_38\_coex-Core]

**R4-2009859 CR to introduce 7.5 kHz UL shift for LTE/NR spectrum sharing in Band 38/n38 (Rel-15)**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0421 Cat: B (Rel-15)  
  
 Source: VODAFONE Group Plc*

**Abstract:**

Introduce 7.5 kHz uplink shift for spectrum sharing solutions in Band 38/n38 (Rel-15).

**Discussion:**

**Decision: Revised to R4-2011825 (from R4-2009859).**

**R4-2011825 CR to introduce 7.5 kHz UL shift for LTE/NR spectrum sharing in Band 38/n38 (Rel-15)**

*Type: CR For: Agreement  
 38.101-1 v15.10.0 CR-0421 Cat: B (Rel-15)  
  
 Source: VODAFONE Group Plc*

**Abstract:**

Introduce 7.5 kHz uplink shift for spectrum sharing solutions in Band 38/n38 (Rel-15).

**Discussion:**

**Decision: Return to.**

#### 10.28.1 General [NR\_n38\_LTE\_38\_coex-Core]

#### 10.28.2 UL shift [NR\_n38\_LTE\_38\_coex-Core]

**R4-2010751 UL shift for LTE/NR spectrum sharing in Band 38/n38**

*Type: discussion For: Approval  
 Source: OPPO*

**Discussion:**

**Decision: Noted.**

**R4-2009707 CR to introduce 7.5 kHz UL shift for LTE/NR spectrum sharing in Band 38/n38**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0418 Cat: A (Rel-16)  
  
 Source: VODAFONE Group Plc*

**Abstract:**

Introduce 7.5 kHz uplink shift for spectrum sharing solutions in Band 38/n38 (Rel-16 shadow CR).

**Discussion:**

**Decision: Revised to R4-2011826 (from R4-2009707).**

**R4-2011826 CR to introduce 7.5 kHz UL shift for LTE/NR spectrum sharing in Band 38/n38**

*Type: CR For: Agreement  
 38.101-1 v16.4.0 CR-0418 Cat: A (Rel-16)  
  
 Source: VODAFONE Group Plc*

**Abstract:**

Introduce 7.5 kHz uplink shift for spectrum sharing solutions in Band 38/n38 (Rel-16 shadow CR).

**Discussion:**

**Decision: Return to.**

## 11 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]

**R4-2011572           Email discussion summary for [96e][139] FS\_6425\_10500MHz \_NR**

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

**Discussion:**

.

**Decision: Revised to R4-2011877 (from R4-2011572).**

**R4-2011877           Email discussion summary for [96e][139] FS\_6425\_10500MHz \_NR**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011827           WF on the Simulations for the SI on 6.425-7.125GHz and 10.0-10.5GHz**

*Type: others For: Approval*

*Source: Nokia*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010370 TR 38.921 V 0.1.0**

*Type: draft TR For: Agreement  
 38.921 v0.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Agreed.**

#### 11.1.1 UE parameters

**R4-2010449 TP to TR for SI IMT parameters - UE parameters**

*Type: other For: Approval  
 38.921 v..  
 Source: Ericsson*

**Abstract:**

This TP to TR (on the SI on IMT parameters) captures the current agreements made on UE parameters

**Discussion:**

**Decision: Noted.**

**R4-2010484 TP to TR 38.921: UE IMT technology related parameters**

*Type: pCR For: Approval  
 38.921 v0.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011828 (from R4-2010484).**

**R4-2011828 TP to TR 38.921: UE IMT technology related parameters**

*Type: pCR For: Approval  
 38.921 v0.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010938 Discussion on remaining issues for UE parameters**

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

**Discussion:**

**Decision: Noted.**

**R4-2009816 UE parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

#### 11.1.2 BS parameters

**R4-2010448 TP to TR for SI IMT parameters - BS parameters**

*Type: other For: Approval  
 38.921 v..  
 Source: Ericsson*

**Abstract:**

This TP to TR (on the SI on IMT parameters) captures the current agreements made on BS parameters

**Discussion:**

**Decision: Noted.**

**R4-2010485 TP to TR 38.921: BS IMT technology related parameters**

*Type: pCR For: Approval  
 38.921 v0.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011829 (from R4-2010485).**

**R4-2011829 TP to TR 38.921: BS IMT technology related parameters**

*Type: pCR For: Approval  
 38.921 v0.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

**R4-2010939 Discussion on remaining issues for BS parameters**

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

**Discussion:**

**Decision: Noted.**

**R4-2009817 BS parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

#### 11.1.3 Coexistence study

##### 11.1.3.1 Simulation assumptions

**R4-2010940 TP to TR38.912 uplink ACIR model**

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

**Discussion:**

**Decision: Revised to R4-2011831 (from R4-2010940).**

**R4-2011831 TP to TR38.912 uplink ACIR model**

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

**Discussion:**

**Decision: Return to.**

**R4-2011195 TP to TR 38.921: Dense urban system level simulation assumptions for study on IMT parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: pCR For: Approval  
 38.921 v0.0.1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution proposes the dense urban system level simulation assumptions for coexistence study on ACLR and ACS of NR BS and UE for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz, and the corresponding TP to TR 38.921.

**Discussion:**

**Decision: Noted.**

##### 11.1.3.2 Downlink

**R4-2010112 Discussion on 6-7GHz ACIR requirement**

*Type: discussion For: Discussion  
 Source: CMCC*

**Discussion:**

**Decision: Noted.**

**R4-2010450 Simulation resulation results - DL - SI IMT parameters**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution is providing coexistence simulations results in DL for the 6-7GHz and 10GHz bands

**Discussion:**

**Decision: Noted.**

**R4-2010486 Downlink co-existence simulation results on 6.425-7.125GHz and 10.0-10.5GHz for urban macro and indoor hotspot**

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

**Discussion:**

**Decision: Noted.**

**R4-2010941 DL simulation results for 6425-7125MHz and 10-10.5GHz**

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

**Discussion:**

**Decision: Noted.**

**R4-2011196 Urban Macro and Indoor Hotspot 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 and indoor hotspot downlink coexistence simulation results according to the agreed assumptions.

**Discussion:**

**Decision: Noted.**

**R4-2009818 Simulation results for 6425-7125MHz and 10-10.5GHz-downlink**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

##### 11.1.3.3 Uplink

**R4-2010451 Simulation resulation results - UL - SI IMT parameters**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution is providing coexistence simulations results in UL for the 6-7GHz and 10GHz bands

**Discussion:**

**Decision: Noted.**

**R4-2010487 Uplink co-existence simulation results on 6.425-7.125GHz and 10.0-10.5GHz for urban macro and indoor hotspot**

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

**Discussion:**

**Decision: Noted.**

**R4-2010942 UL simulation results for 6425-7125MHz and 10-10.5GHz**

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

**Discussion:**

**Decision: Noted.**

**R4-2011197 Urban Macro and Indoor Hotspot Uplink 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 and indoor hotspot uplink coexistence simulation results according to the agreed assumptions.

**Discussion:**

**Decision: Noted.**

**R4-2009819 Simulation results for 6425-7125MHz and 10-10.5GHz-uplink**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

#### 11.1.4 Antenna characteristics

**R4-2010180 TP to TR 38.921: Addition of BS antenna model and parameters in subclause 4.2.3 and subclause 8.1**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution a text proposal has been created based on agreements from last meeting regarding base stations antenna array simulation parameters applicable for the simulation campaign part of the SI. The text proposal is attached at the end on this

**Discussion:**

**Decision: Revised to R4-2011830 (from R4-2010180).**

**R4-2011830 TP to TR 38.921: Addition of BS antenna model and parameters in subclause 4.2.3 and subclause 8.1**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution a text proposal has been created based on agreements from last meeting regarding base stations antenna array simulation parameters applicable for the simulation campaign part of the SI. The text proposal is attached at the end on this

**Discussion:**

**Decision: Return to.**

**R4-2010488 TP to TR 38.921: antenna characteristics on 6.425-7.125GHz and 10.0-10.5 GHz**

*Type: pCR For: Approval  
 38.921 v0.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Noted.**

**R4-2011198 Recommendation on Small cell outdoor/Micro urban AAS BS Maximum Output Power 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 our recommendation on Small cell outdoor/Micro urban AAS BS Maximum Output Power for Frequency Ranges 6.425-7.125GHz and 10.0-10.5GHz to close the open issue.

**Discussion:**

**Decision: Noted.**

**R4-2009820 Remaining issue on antenna characteristics**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

#### 11.1.5 Relevant information for the sharing and compatibility studies

**R4-2010489 Spatial emission and interference mitigation**

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

**Discussion:**

**Decision: Noted.**

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

## 12 Rel-17 non-spectrum related work items for NR

## 13 Rel-17 Study Items for NR

### 13.2 Study on supporting NR from 52.6 GHz to 71 GHz [FS\_NR\_52\_to\_71GHz]

**R4-2011573           Email discussion summary for [96e][140] FS\_NR\_52\_to\_71GHz**

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

**Discussion:**

.

**Decision: Revised to R4-2011878 (from R4-2011573).**

**R4-2011878           Email discussion summary for [96e][140] FS\_NR\_52\_to\_71GHz**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011837           WF on PA and antenna assumptions for 60 GHz BS**

*Type: others For: Approval*

*Source: Huawei*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011838           WF on numerologies for FS\_NR\_52\_to\_71GHz**

*Type: others For: Approval*

*Source: Intel*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011839           WF on PTRS evaluation and RAN4 aspects**

*Type: others For: Approval*

*Source: Nokia*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011840           WF on power amplifier model in 60 GHz**

*Type: others For: Approval*

*Source: Skyworks*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2009562 Views on the phase noise model above 52 GHz**

*Type: other For: Discussion  
 Source: Sony*

**Discussion:**

**Decision: Noted.**

#### 13.2.1 General [FS\_NR\_52\_to\_71GHz]

**R4-2011292 Work plan for Study on supporting NR from 52.6 GHz to 71 GHz**

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

**Discussion:**

**Decision: Noted.**

**R4-2011439 Phase noise and RF impairments modeling for beyond 52GHz**

*Type: discussion For: Approval  
 Source: FUTUREWEI*

**Discussion:**

**Decision: Noted.**

**R4-2009757 On phase noise and PA models in 52.6 - 71 GHz**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Discussion:**

**Decision: Noted.**

**R4-2009974 Overview of SI & WI, requirements and spectrum for NR in 52.6-71 GHz**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

During the Study Item phase, RAN4 needs to carry out work needed to support the decision on waveform parameterization. During the WI, the RAN4 part of work also imply to specify new bands with corresponding BS, UE and RRM requirements. In this paper, an o

**Discussion:**

**Decision: Noted.**

#### 13.2.2 Numerology, Channel BW [FS\_NR\_52\_to\_71GHz]

**R4-2010109 Numerology and channel BW on supporting NR from 52.6GHz to 71GHz**

*Type: discussion For: Discussion  
 Source: CMCC*

**Discussion:**

**Decision: Noted.**

**R4-2010176 On 52.6 to 71 GHz phase noise characteristics and draft LS to RAN1**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution, we present a new phase noise model based on recently published data on both state-of-the-art PLL and crystal oscillators that lead to an improved model representing the current technology envelope. It should of course be understood t

**Discussion:**

**Decision: Noted.**

**R4-2010291 Discussion on system parameters for B52.6G**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

**Decision: Noted.**

**R4-2010500 Discussion on numerology and channel bandwidth for 52.6 GHz to 71 GHz**

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

**Discussion:**

**Decision: Noted.**

**R4-2010726 Applicable numerologies and channelization options for above 52.6 GHz**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution applicable numerologies and channelization for NR above 52.6 GHz are discussed.

**Discussion:**

**Decision: Noted.**

**R4-2010946 Discussion on system parameters for 52.6GHz-71GHz**

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

**Discussion:**

**Decision: Noted.**

**R4-2011440 Numerology considerations for beyond 52GHz**

*Type: discussion For: Approval  
 Source: FUTUREWEI*

**Discussion:**

**Decision: Noted.**

**R4-2009758 On numerology and channel bandwidth in 52.6 - 71 GHz**

*Type: discussion For: Approval  
 Source: Intel Corporation*

**Discussion:**

**Decision: Noted.**

**R4-2009798 Discussion on numerology and CBW for above 52.6 GHz**

*Type: other For: Approval  
 Source: CATT*

**Discussion:**

**Decision: Noted.**

**R4-2009945 Initial considerations on the numerology and channel bandwidth sizes for 60GHz frequency range**

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

**Discussion:**

**Decision: Noted.**

#### 13.2.3 Others [FS\_NR\_52\_to\_71GHz]

**R4-2010292 Discussion on RF impairments for B52.6G**

*Type: discussion For: Approval  
 Source: vivo*

**Discussion:**

**Decision: Noted.**

**R4-2010727 Reply LS to RAN1 and NR evaluations for above 52.6 GHz**

*Type: LS out For: Approval  
 to TSG-RAN WG1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution NR performance evaluation results for above 52.6 GHz operation are provided and a LS to RAN1 is proposed.

**Discussion:**

**Decision: Noted.**

**R4-2010845 Key technology considerations relating to 52-71GHz specification**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Details of some technology considerations for the frequency range

**Discussion:**

**Decision: Noted.**

**R4-2011268 Initial discussion on the BS-related aspects for 52.6 - 71 GHz range SI**

*Type: pCR For: Approval  
 38.808 v0.0.1  
 Source: Huawei*

**Abstract:**

In this contribution we provide an initial discussion on BS-related aspects of the 52.6 – 71 GHz study item, including topics which are found to be relevant to the RAN4 part of this SI, but which were not directly addressed in the WID objectives. Related

**Discussion:**

**Decision: Noted.**

**R4-2011494 on PN model for 60GHz+reply LS RAN1**

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

**Discussion:**

**Decision: Noted.**

**R4-2009921 Key technology considerations relating to 52-71GHz specification**

*Type: other For: Approval  
 Source: Ericsson Hungary Ltd*

**Abstract:**

Details of some technology considerations for the frequency range

**Discussion:**

**Decision: Noted.**

**R4-2009946 Initial considerations on 60 GHz PN and PA models**

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

**Discussion:**

**Decision: Noted.**

## 14 Rel-17 Work Items for LTE

### 14.1 LTE inter-band Carrier Aggregation for 2 bands DL with 1 band UL [LTE\_CA\_R17\_2BDL\_1BUL]

**R4-2011574           Email discussion summary for [96e][141] LTE\_Baskets**

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

**Discussion:**

.

**Decision:                    Return to**

#### 14.1.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_2BDL\_1BUL-Core/Perf]

**R4-2011332 Revised WID: Rel17 LTE inter-band CA for 2 bands DL with 1 band UL**

*Type: WID revised For: Information  
 Source: Qualcomm Incorporated*

**Discussion:**

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

**R4-2011333 Introduction of Rel-17 LTE inter-band CA for 2 bands DL with 1 band UL combinations in TS36.101**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Qualcomm Incorporated*

**Discussion:**

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

**R4-2011334 TR skeleton for TR 36.717-02-01 Rel-17 LTE inter-band CA for 2 bands DL and 1 band UL CA**

*Type: draft TR For: Agreement  
 36.717-02-01 v0.0.1  
 Source: Qualcomm Incorporated*

**Discussion:**

**Decision: Agreed.**

#### 14.1.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R17\_2BDL\_1BUL-Core]

#### 14.1.3 UE RF without specific issues [LTE\_CA\_R17\_2BDL\_1BUL-Core]

**R4-2010865 Draft CR to 36.101 to add CA\_3C-38A with UL CA\_3C**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010866 Draft CR to 36.101 to add CA\_3C-20A with UL CA\_3C**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

### 14.2 LTE inter-band Carrier Aggregation for 3 bands DL with 1 band UL [LTE\_CA\_R17\_3BDL\_1BUL]

**R4-2009710 TP for TR 36.717-03-01: CA\_3-8-41**

*Type: pCR For: Approval  
 36.717-03-01 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_3-8-41 for TR 36.717-03-01.

**Discussion:**

**Decision: Revised to R4-2011579 (from R4-2009710).**

**R4-2011579 TP for TR 36.717-03-01: CA\_3-8-41**

*Type: pCR For: Approval  
 36.717-03-01 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_3-8-41 for TR 36.717-03-01.

**Discussion:**

**Decision: Return to.**

**R4-2009711 TP for TR 36.717-03-01 CA\_3-20-38**

*Type: pCR For: Approval  
 36.717-03-01 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_3-20-38 for TR 36.717-03-01.

**Discussion:**

**Decision: Revised to R4-2011580 (from R4-2009711).**

**R4-2011580 TP for TR 36.717-03-01 CA\_3-20-38**

*Type: pCR For: Approval  
 36.717-03-01 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_3-20-38 for TR 36.717-03-01.

**Discussion:**

**Decision: Return to.**

**R4-2009712 TP for TR 36.717-03-01: CA\_3-40-41**

*Type: pCR For: Approval  
 36.717-03-01 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_3-40-41 for TR 36.717-03-01.

**Discussion:**

**Decision: Revised to R4-2011581 (from R4-2009712).**

**R4-2011581 TP for TR 36.717-03-01: CA\_3-40-41**

*Type: pCR For: Approval  
 36.717-03-01 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_3-40-41 for TR 36.717-03-01.

**Discussion:**

**Decision: Return to.**

#### 14.2.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_3BDL\_1BUL-Core/Perf]

**R4-2011499 Revised WID for LTE inter-band CA for 3 bands DL with 1 bands UL**

*Type: WID revised For: Information  
 Source: Huawei,HiSilicon*

**Discussion:**

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

**R4-2011501 Introduction of completed R16 3DL band combinations to TS 36.101**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Huawei,HiSilicon*

**Discussion:**

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

**R4-2011502 Introduction of completed R16 3DL band combinations to TS 36.101**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Huawei,HiSilicon*

**Discussion:**

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

**R4-2011503 TR skeleton for Rel-17 LTE inter-band CA for 3 bands DL with 1 band UL**

*Type: draft TR For: Agreement  
 36.717-03-01 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Agreed.**

#### 14.2.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R17\_3BDL\_1BUL-Core]

**R4-2010874 TP for TR 36.717-03-01: CA\_7A-28A-66A / CA\_7C-28A-66A**

*Type: pCR For: Approval  
 36.717-03-01 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

#### 14.2.3 UE RF without specific issues [LTE\_CA\_R17\_3BDL\_1BUL-Core]

**R4-2010867 Draft CR to 36.101 to add CA\_3C-7A-8A with UL CA\_3C**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010868 Draft CR to 36.101 to add CA\_1A-3C-38A with UL CA\_3C**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010869 Draft CR to 36.101 to add CA\_3C-8A-38A with UL CA\_3C**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010870 Draft CR to 36.101 to add CA\_1A-3C-20A with UL CA\_3C**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010871 Draft CR to 36.101 to add CA\_3C-8A-20A**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Endorsed.**

**R4-2010872 TP for TR 36.717-03-01: CA\_3A-20A-38A/CA\_3C-20A-38A with UL CA\_3C**

*Type: pCR For: Approval  
 36.717-03-01 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010873 TP for TR 36.717-03-01: CA\_8A-20A-38A**

*Type: pCR For: Approval  
 36.717-03-01 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Revised to R4-2011583 (from R4-2010873).**

**R4-2011583 TP for TR 36.717-03-01: CA\_8A-20A-38A**

*Type: pCR For: Approval  
 36.717-03-01 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Return to.**

### 14.3 LTE inter-band Carrier Aggregation for x bands DL (x=4, 5) with 1 band UL [LTE\_CA\_R17\_xBDL\_1BUL]

**R4-2009713 TP for TR 36.717-04-01: CA\_1-3-20-38**

*Type: pCR For: Approval  
 36.717-04-01 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_1-3-20-38 for TR 36.717-04-01.

**Discussion:**

**Decision: Revised to R4-2011582 (from R4-2009713).**

**R4-2011582 TP for TR 36.717-04-01: CA\_1-3-20-38**

*Type: pCR For: Approval  
 36.717-04-01 v0.0.1  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_1-3-20-38 for TR 36.717-04-01.

**Discussion:**

**Decision: Return to.**

#### 14.3.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_xBDL\_1BUL-Core]

**R4-2011404 Revised WID: LTE Advanced inter-band CA Rel-17 for x bands DL (x=4, 5) with 1 band UL**

*Type: WID revised For: Information  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

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

**R4-2011405 Updated scope of TR: LTE inter-band CA for 4/5 bands DL with 1 band UL**

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

**Discussion:**

**Decision: Approved.**

**R4-2011406 TR 36.717-04-01 v0.0.1**

*Type: draft TR For: Agreement  
 36.717-04-01 v0.0.1  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

**Decision: Agreed.**

#### 14.3.2 UE RF with 4 LTE bands CA [LTE\_CA\_R17\_xBDL\_1BUL-Core]

**R4-2010875 TP for TR 36.717-04-01: CA\_2A-7A-28A-66A / CA\_2A-7C-28A-66A**

*Type: pCR For: Approval  
 36.717-04-01 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

**R4-2010876 TP for TR 36.717-04-01: CA\_2A-5A-7A-66A / CA\_2A-5A-7C-66A**

*Type: pCR For: Approval  
 36.717-04-01 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Approved.**

#### 14.3.3 UE RF with 5 LTE bands CA [LTE\_CA\_R17\_xBDL\_1BUL-Core]

### 14.4 LTE inter-band Carrier Aggregation for 2 bands DL with 2 band UL [LTE\_CA\_R17\_2BDL\_2BUL]

#### 14.4.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_2BDL\_2BUL-Core]

**R4-2010828 TR skeleton 36.717-02-02**

*Type: draft TR For: Agreement  
 36.717-02-02 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

**Decision: Agreed.**

**R4-2010829 Introduction of completed LTE CA for 2 bands DL with 2 bands UL into Rel-17 TS 36.101**

*Type: draftCR For: Endorsement  
 36.101 v16.6.0  
 Source: Huawei, HiSilicon*

**Discussion:**

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

**R4-2010830 Revised WID for LTE inter-band CA for 2 bands DL with 2 bands UL**

*Type: WID revised For: Information  
 Source: Huawei, HiSilicon*

**Discussion:**

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

#### 14.4.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R17\_2BDL\_2BUL-Core]

#### 14.4.3 UE RF without specific issues [LTE\_CA\_R17\_2BDL\_2BUL-Core]

### 14.5 LTE inter-band Carrier Aggregation for x bands DL (x= 3, 4, 5) with 2 band UL [LTE\_CA\_R17\_xBDL\_2BUL]

#### 14.5.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_xBDL\_2BUL-Core]

**R4-2010091 TR 36.717-03-02 v0.0.1 TR Skeleton for LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL in Rel-17**

*Type: draft TR For: Agreement  
 36.717-03-02 v0.0.1  
 Source: LG Electronics Polska*

**Discussion:**

**Decision: Agreed.**

**R4-2010127 Revised WID on LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL in Rel-17**

*Type: WID revised For: Information  
 Source: LG Electronics Polska*

**Discussion:**

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

**R4-2010128 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 v16.6.0 CR-5655 Cat: B (Rel-17)  
  
 Source: LG Electronics Polska*

**Discussion:**

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

#### 14.5.2 UE RF with MSD [LTE\_CA\_R17\_xBDL\_2BUL-Core]

**R4-2010092 TP on initial summary of self-interference analysis for new x bands (x=3,4,5) DL with 2 bands UL**

*Type: pCR For: Approval  
 36.717-03-02 v0.0.1  
 Source: LG Electronics Polska*

**Discussion:**

**Decision: Approved.**

#### 14.5.3 UE RF without MSD [LTE\_CA\_R17\_xBDL\_2BUL-Core]

**R4-2010093 TP on the general part of TR 36.717-03-02**

*Type: pCR For: Approval  
 36.717-03-02 v0.0.1  
 Source: LG Electronics Polska*

**Discussion:**

**Decision: Approved.**

### 14.6 RRM for LTE CA basket WIs [LTE\_CA\_R17\_xxxx]

#### 14.6.1 RRM Core (36.133) [LTE\_CA\_R17\_xxxx-Core]

#### 14.6.2 RRM Perf (36.133) [LTE\_CA\_R17\_xxxx-Perf]

### 14.7 New WID on Additional LTE bands for UE category M1&M2 and/or NB1&NB2 in Rel-17 [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2]

**R4-2011575           Email discussion summary for [96e][142] LTE\_bands\_R17\_M1\_M2\_NB1\_NB2**

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

**Discussion:**

.

**Decision: Revised to R4-2011879 (from R4-2011575).**

**R4-2011879           Email discussion summary for [96e][142] LTE\_bands\_R17\_M1\_M2\_NB1\_NB2**

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

**Discussion:**

.

**Decision: Return to.**

**R4-2011832           WF on adding B24 for M1/M2 and NB1/NB2**

*Type: others For: Approval*

*Source: Ericsson*

**Discussion:**

.

**Decision:                    Return to.**

#### 14.7.1 Rapporteur Input (WID/TR/CR) [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2-Core]

**R4-2011039 Work plan and RF analysis on introduction of B24 for M1/M2 and NB1/NB2**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

in this paper, the RF impact on the spec and future work plan is proposed.

**Discussion:**

**Decision: Noted.**

#### 14.7.2 RF [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2-Core]

#### 14.7.3 Others [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2-Perf]

### 14.8 Modification of LTE Band 24 specifications to comply with updated regulatory emission limits [LTE\_B24\_mod]

#### 14.8.1 General and rapporteur input [LTE\_B24\_mod-Core]

**R4-2010747 Work plan for modification of LTE Band 24**

*Type: Work Plan For: Approval  
 Source: Ligado Networks*

**Discussion:**

**Decision: Approved.**

#### 14.8.2 UE RF [LTE\_B24\_mod-Core]

**R4-2010748 Summary of required changes to UE E-UTRA specifications for Band 24 to address updated regulatory emission limits**

*Type: discussion For: Approval  
 Source: Ligado Networks*

**Discussion:**

**Decision: Noted.**

#### 14.8.3 BS RF [LTE\_B24\_mod-Core]

**R4-2010749 Review of material on record with FCC for Band 24 downlink and summary of required changes to BS E-UTRA specifications for Band 24**

*Type: discussion For: Approval  
 Source: Ligado Networks*

**Discussion:**

**Decision: Noted.**

#### 14.8.4 RRM and others [LTE\_B24\_mod-Core/Perf]

**R4-2010750 Assessment of changes resulting from regulatory updates for Band 24 to E-UTRA RRM specifications**

*Type: discussion For: Approval  
 Source: Ligado Networks*

**Discussion:**

**Decision: Noted.**

**R4-2011509 Initial considerations on band 24 impact on E911 emergency calls**

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

**Discussion:**

**Decision: Noted.**

## 15 Rel-17 Study Items for LTE

### 15.1 High-power UE operation for fixed-wireless/vehicle-mounted use cases in LTE bands 5 and 12 and NR band n71 [FS\_LTE\_NR\_HPUE\_FWVM]

**R4-2011576           Email discussion summary for [96e][143] FS\_LTE\_NR\_HPUE\_FWVM**

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

**Discussion:**

.

**Decision: Revised to R4-2011880 (from R4-2011576).**

**R4-2011880           Email discussion summary for [96e][143] FS\_LTE\_NR\_HPUE\_FWVM**

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

**Discussion:**

.

**Decision: Return to.**

#### 15.1.1 General

**R4-2011199 Work Plan for Study on High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71**

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

**Abstract:**

This contribution provides a work plan according to the list of tasks in the SID. It is proposed to approve this work plan in RAN4 to be used as guidance for agenda and contributions for this study item in the coming RAN4 meeting, considering the contribu

**Discussion:**

**Decision: Return to.**

**R4-2011200 TR 37.xxx V0.0.1: High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71**

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

**Abstract:**

Skeleton TR for Study on High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71.

**Discussion:**

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

**R4-2011219 TR 37.xxx V0.0.1: High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71**

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

**Discussion:**

**Decision: Agreed.**

#### 15.1.2 Coexistence study

**R4-2011201 TP to TR 37.xxx: Simulation assumptions for coexistence study on High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71**

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

**Abstract:**

This contribution proposes the system level simulation assumptions for the coexistence study and the corresponding TP to TR.

**Discussion:**

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

**R4-2011220 TP to TR 37.xxx: Simulation assumptions for coexistence study on High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71**

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

**Discussion:**

**Decision: Revised to R4-2011833 (from R4-2011220).**

**R4-2011833 TP to TR 37.xxx: Simulation assumptions for coexistence study on High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71**

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

**Discussion:**

**Decision: Return to.**

#### 15.1.3 UE RF

## 16 Liaison and output to other groups

## 17 Revision of the Work Plan

### 17.1 Simplification of band combinations in RAN4 specifications

**R4-2011577           Email discussion summary for [96e][144] BC\_simplification**

*Type: other For: Information  
 Source: Moderator (NTT DoCoMo)*

**Discussion:**

.

**Decision: Revised to R4-2011881 (from R4-2011577).**

**R4-2011881           Email discussion summary for [96e][144] BC\_simplification**

*Type: other For: Information  
 Source: Moderator (NTT DoCoMo)*

**Discussion:**

.

**Decision: Return to.**

**R4-2011834           WF on wild card approach**

*Type: others For: Approval*

*Source: ZTE*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011835           WF on modified procedure for DC including FR2 and further simplification on band combinations**

*Type: others For: Approval*

*Source: Nokia*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2011836           WF on alternative to creating new BCSs**

*Type: others For: Approval*

*Source: T-Mobile USA*

**Discussion:**

.

**Decision:                    Return to.**

**R4-2010062 An alternative to creating new BCSs**

*Type: discussion For: Approval  
 Source: T-Mobile USA, Deutsche Telekom, AT&T, Telus, Bell Canada, Telstra, Telecom Italia, Ericsson*

**Discussion:**

**Decision: Noted.**

**R4-2010324 Simplification on CA & EN-DC configurations**

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

**Abstract:**

Simplification on CA & EN-DC configurations

**Discussion:**

**Decision: Noted.**

**R4-2010455 On band simplification**

*Type: other For: Approval  
 38.101-3 v..  
 Source: Nokia Japan*

**Abstract:**

How to simplify the procedures for the introduction of new EN-DC band configurations including FR2 is discussed.

**Discussion:**

**Decision: Noted.**

**R4-2009950 Simplification of band combination tables in 38.101**

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

**Discussion:**

**Decision: Noted.**

**R4-2009951 CR for simplification of band combination tables for 38101-3 Rel16 with Excel**

*Type: CR For: Agreement  
 38.101-3 v16.4.0 CR-0315 Cat: D (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

**Decision: Return to.**

### 17.2 R17 new proposals

#### 17.2.1 Spectrum related

**R4-2010267 New basket WID: Band combination specific requirements for UE power class 2 (PC2) for NR inter-band Carrier Aggregation with 2 bands downlink and 2 bands uplink**

*Type: WID new For: Information  
 Source: China Telecom*

**Abstract:**

This new WI is to capture the band-combination specific requirements for CA shifted from RP-201337 or new proposed according to MCC suggestion. The background could be found in AI 10.16.1

**Discussion:**

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

**R4-2009667 Proposal on new Rel-17 Basket: New WID on Dual Connectivity (DC) of x bands (x=2,3,4) LTE inter-band CA (xDL/1UL) and 1 NR FR1 band (1DL/1UL) and 1 NR FR2 band (1DL/1UL)**

*Type: Work Plan For: Approval  
 Source: Samsung*

**Discussion:**

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

#### 17.2.2 Non-spectrum related

**R4-2010055 RAN4 Rel-17 RRM work area summary**

*Type: discussion For: Information  
 Source: Apple*

**Discussion:**

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

**R4-2010058 New SID: Efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidths**

*Type: SID new For: Information  
 Source: T-Mobile USA, Ericsson*

**Discussion:**

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

**R4-2010059 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.**

**R4-2010074 Motivation for NR support for High speed train scenario in Rel-17**

*Type: WID new For: Information  
 Source: CMCC*

**Discussion:**

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

**R4-2010075 New WID on NR support for high speed train scenario**

*Type: WID new For: Information  
 Source: CMCC*

**Discussion:**

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

**R4-2010089 Motivation on NR RRM requirement for UE different RX beam sets in FR2**

*Type: WID new For: Information  
 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.**

**R4-2010090 New WID on NR RRM requirement for UE different RX beam sets in FR2**

*Type: WID new For: Information  
 Source: LG Electronics Inc.*

**Abstract:**

It is new WID on NR RRM requirement for UE different RX beam sets in FR2.

**Discussion:**

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

**R4-2010110 Intermediate summary for RAN4 non-spectrum Rel-17 items: [FR1 HST and ATG]**

*Type: other For: Information  
 Source: CMCC*

**Discussion:**

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

**R4-2010122 Motivation for supporting non-colocated scenarios for band 42 and n77**

*Type: discussion For: Information  
 Source: SoftBank Corp.*

**Discussion:**

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

**R4-2010316 Motivation to introduce new R17 WI on further RRM enhancement**

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

**Discussion:**

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

**R4-2010357 Intermediate summary for e-mail discussion for Rel-17 proposal FR2 HST**

*Type: other For: Information  
 Source: Samsung*

**Discussion:**

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

**R4-2010753 Enhancements to TCI state known status in Rel-17**

*Type: discussion For: Approval  
 Source: NEC*

**Abstract:**

In this contribution we propose to include TCI state known status enhancements in the scope of TCI switch enhancements feature under WI Rel-17 RRM further enhancements.

**Discussion:**

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

**R4-2010852 Motivation for optimizations on power class fall back**

*Type: discussion For: Information  
 Source: vivo*

**Discussion:**

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

**R4-2010853 [Draft] New SID: Optimizations on power class fall back**

*Type: SID new For: Information  
 Source: vivo, China Unicom*

**Discussion:**

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

**R4-2011029 Discussion on ATG network**

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

**Discussion:**

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

**R4-2011175 Motivation for further RRM enhancement in Rel-17**

*Type: discussion For: Information  
 Source: Huawei, Hisilicon*

**Discussion:**

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

**R4-2011176 New WID on further RRM enhancement**

*Type: WID new For: Information  
 Source: Huawei, Hisilicon*

**Discussion:**

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

**R4-2011185 [Draft] New WID: Optimizations on power class fall back**

*Type: WID new For: Information  
 Source: vivo*

**Discussion:**

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

**R4-2011221 Intermediate summary for e-mail discussion on OTA aspects of the Rel.17 RAN4 non-spectrum package**

*Type: discussion For: Information  
 Source: Moderator(Qualcomm Incorporated)*

**Discussion:**

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

**R4-2011237 Motivation for WI: NR FR1 UE SA and EN-DC TRP and TRS**

*Type: discussion For: Information  
 Source: vivo*

**Abstract:**

Motivation paper

**Discussion:**

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

**R4-2011238 New WID: NR FR1 UE SA and EN-DC TRP and TRS**

*Type: WID new For: Information  
 Source: vivo, OPPO, CMCC, CAICT, Rohde & Schwarz*

**Abstract:**

WID on NR FR1 TRP&TRS OTA

**Discussion:**

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

**R4-2011320 Motivation on NR RRM requirement enhancements in Rel-17**

*Type: discussion For: Information  
 Source: ZTE*

**Discussion:**

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

**R4-2011321 New WID on NR RRM requirement enhancements in Rel-17**

*Type: WID new For: Information  
 Source: ZTE*

**Discussion:**

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

**R4-2011463 Motivation for new WI on supporting overlapping CA for LTE**

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

**Abstract:**

Motivation on support of intra-band overlapping CA for LTE.

**Discussion:**

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

**R4-2011464 New WID proposal: supporting overlapping CA for LTE**

*Type: WID new For: Information  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution, we provide the draft WID on intra-band overlapping CA for LTE.

**Discussion:**

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

**R4-2011465 Motivation for new WI on Rel-17 NR FR1 RF**

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

**Abstract:**

Motivation paper for FR1 RF enhancement for Rel-17.

**Discussion:**

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

**R4-2011466 New WID proposal: RF requirements enhancement for NR frequency range 1 (FR1) in Rel-17**

*Type: WID new For: Information  
 Source: Huawei, HiSilicon*

**Abstract:**

In this paper, we provide the updated WID for FR1 RF enhancement for Rel-17.

**Discussion:**

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

**R4-2009585 Intermediate email discussion summary for RAN4 Rel-17 demodulation scope**

*Type: discussion For: Discussion  
 Source: Moderator (China Telecom)*

**Discussion:**

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

**R4-2009586 Motivation for further enhancement on NR demodulation performance requirements**

*Type: discussion For: Information  
 Source: China Telecom*

**Discussion:**

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

**R4-2009587 Draft WID: Further enhancement on NR demodulation performance requirements**

*Type: discussion For: Information  
 Source: China Telecom*

**Discussion:**

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

**R4-2009750 Motivation to introduce new R17 WI on NR MG enhancements**

*Type: other For: Information  
 Source: Intel Corporation, Apple*

**Discussion:**

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

**R4-2009751 New WI Proposal on NR MG enhancements**

*Type: other For: Information  
 Source: Intel Corporation, Apple*

**Discussion:**

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

**R4-2009821 Motivation for NR RRM further enhancement in Rel-17**

*Type: discussion For: Discussion  
 Source: CATT*

**Discussion:**

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

**R4-2009822 New WID on NR RRM further enhancement in Rel-17**

*Type: WID new For: Information  
 Source: CATT*

**Discussion:**

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

**R4-2009918 Motivation paper on REL-17 RRM further enhancement**

*Type: discussion For: Information  
 Source: Apple, Intel*

**Discussion:**

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

**R4-2009919 WID of REL-17 NR RRM further enhancement**

*Type: other For: Information  
 Source: Apple, Intel*

**Discussion:**

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

**R4-2009958 Views on Rel-17 non-spectrum RF enhancements**

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

**Discussion:**

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

**R4-2010336 Discussion on RLM/BFD relaxation in R17 Power saving**

*Type: discussion For: Information  
 Source: vivo*

**Discussion:**

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

**R4-2011461 Motivation for update of SI to support irregular channel bandwidth**

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

**Abstract:**

Motivation on the method to support irregular channel bandwidth

**Discussion:**

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

**R4-2011462 SID on efficient utilization of licensed spectrum that is no aligned with existing NR channel bandwidth**

*Type: SID new For: Information  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution we provide the proposals for update of SID on support of irregular channel bandwidth based on the paper in the last RAN plenary.

**Discussion:**

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

### 17.3 Others

## 18 Any other business

## 19 Close of the E-meeting

Report prepared by: MCC