

## Annex A (informative): Change history

| Change history |        |           |      |     |   |       |       |
|----------------|--------|-----------|------|-----|---|-------|-------|
| Date           | TSG #  | TSG Doc.  | CR   | Rev | Subject/Comment   | Old   | New   |
| 2006-09        |        |           |      |     | Draft version created   |       | 0.0.0 |
| 2006-10        |        |           |      |     | Endorsed by RAN1  | 0.0.0 | 0.1.0 |
| 2007-01        |        |           |      |     | Inclusion of decisions from RAN1#46bis and RAN1#47                      | 0.1.0 | 0.1.1 |
| 2007-01        |        |           |      |     | Endorsed by RAN1  | 0.1.1 | 0.2.0 |
| 2007-02        |        |           |      |     | Inclusion of decisions from RAN1#47bis                                  | 0.2.0 | 0.2.1 |
| 2007-02        |        |           |      |     | Endorsed by RAN1  | 0.2.1 | 0.3.0 |
| 2007-02        |        |           |      |     | Editor's version including decisions from RAN1#48 & RAN1#47bis          | 0.3.0 | 0.3.1 |
| 2007-03        |        |           |      |     | Updated Editor's version  | 0.3.1 | 0.3.2 |
| 2007-03        | RAN-35 | RP-070171 |      |     | For information at RAN#35   | 0.3.2 | 1.0.0 |
| 2007-03        |        |           |      |     | Random access text modified to better reflect RAN1 scope                | 1.0.0 | 1.0.1 |
| 2007-03        |        |           |      |     | Updated Editor's version  | 1.0.1 | 1.0.2 |
| 2007-03        |        |           |      |     | Endorsed by RAN1  | 1.0.2 | 1.1.0 |
| 2007-05        |        |           |      |     | Updated Editor's version  | 1.1.0 | 1.1.1 |
| 2007-05        |        |           |      |     | Updated Editor's version  | 1.1.1 | 1.1.2 |
| 2007-05        |        |           |      |     | Endorsed by RAN1  | 1.1.2 | 1.2.0 |
| 2007-08        |        |           |      |     | Updated Editor's version  | 1.2.0 | 1.2.1 |
| 2007-08        |        |           |      |     | Updated Editor's version – uplink power control from RAN1#49bis         | 1.2.1 | 1.2.2 |
| 2007-08        |        |           |      |     | Endorsed by RAN1  | 1.2.2 | 1.3.0 |
| 2007-09        |        |           |      |     | Updated Editor's version reflecting RAN#50 decisions                    | 1.3.0 | 1.3.1 |
| 2007-09        |        |           |      |     | Updated Editor's version reflecting comments                            | 1.3.1 | 1.3.2 |
| 2007-09        |        |           |      |     | Updated Editor's version reflecting further comments                    | 1.3.2 | 1.3.3 |
| 2007-09        |        |           |      |     | Updated Editor's version reflecting further comments                    | 1.3.3 | 1.3.4 |
| 2007-09        |        |           |      |     | Updated Editor's version reflecting further comments                    | 1.3.4 | 1.3.5 |
| 2007-09        | RAN-37 | RP-070731 |      |     | Endorsed by RAN1  | 1.3.5 | 2.0.0 |
| 2007-09        | RAN-37 | RP-070737 |      |     | For approval at RAN#37  | 2.0.0 | 2.1.0 |
| 12/09/07       | RP-37  | RP-070737 | -    | -   | Approved version  | 2.1.0 | 8.0.0 |
| 28/11/07       | RP-38  | RP-070949 | 0001 | 2   | Update of 36.213  | 8.0.0 | 8.1.0 |
| 05/03/08       | RP-39  | RP-080145 | 0002 | -   | Update of TS 36.213 according to changes listed in cover sheet          | 8.1.0 | 8.2.0 |
| 28/05/08       | RP-40  | RP-080434 | 0003 | 1   | PUCCH timing and other formatting and typo corrections                  | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0006 | 1   | PUCCH power control for non-unicast information                         | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0008 | -   | UE ACK/NACK Procedure   | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0009 | -   | UL ACK/NACK timing for TDD  | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0010 | -   | Specification of UL control channel assignment                          | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0011 | -   | Precoding Matrix for 2Tx Open-loop SM                                   | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0012 | -   | Clarifications on UE selected CQI reports                               | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0013 | 1   | UL HARQ Operation and Timing  | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0014 | -   | SRS power control   | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0015 | 1   | Correction of UE PUSCH frequency hopping procedure                      | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0017 | 4   | Blind PDCCH decoding  | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0019 | 1   | Tx Mode vs DCI format is clarified                                      | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0020 | -   | Resource allocation for distributed VRB                                 | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0021 | 2   | Power Headroom  | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0022 | -   | Clarification for RI reporting in PUCCH and PUSCH reporting modes       | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0025 | -   | Correction of the description of PUSCH power control for TDD            | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0026 | -   | UL ACK/NACK procedure for TDD   | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0027 | -   | Indication of radio problem detection                                   | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0028 | -   | Definition of Relative Narrowband TX Power Indicator                    | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0029 | -   | Calculation of $\Delta_{TF}(i)$ for UL-PC                               | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0030 | -   | CQI reference and set S definition, CQI mode removal, and Miscellaneous | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0031 | -   | Modulation order and TBS determination for PDSCH and PUSCH              | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080434 | 0032 | -   | On Sounding RS  | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080426 | 0033 | -   | Multiplexing of rank and CQI/PMI reports on PUCCH                       | 8.2.0 | 8.3.0 |
| 28/05/08       | RP-40  | RP-080466 | 0034 | -   | Timing advance command responding time                                  | 8.2.0 | 8.3.0 |
| 09/09/08       | RP-41  | RP-080670 | 37   | 2   | SRS hopping pattern for closed loop antenna selection                   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41  | RP-080670 | 39   | 2   | Clarification on uplink power control                                   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41  | RP-080670 | 41   | -   | Clarification on DCI formats using resource allocation type 2           | 8.3.0 | 8.4.0 |

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|----------------|-------|-----------|-----|-----|---|-------|-------|
| Date           | TSG # | TSG Doc.  | CR  | Rev | Subject/Comment   | Old   | New   |
| 09/09/08       | RP-41 | RP-080670 | 43  | 2   | Clarification on tree structure of CCE aggregations                             | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 46  | 2   | Correction of the description of PUCCH power control for TDD                    | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 47  | 1   | Removal of CR0009   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 48  | 1   | Correction of mapping of cyclic shift value to PHICH modifier                   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 49  | -   | TBS disabling for DCI formats 2 and 2A  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 50  | -   | Correction of maximum TBS sizes   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 51  | -   | Completion of the table specifying the number of bits for the periodic feedback | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 54  | -   | Clarification of RNTI for PUSCH/PUCCH power control with DCI formats 3/3A       | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 55  | 1   | Clarification on mapping of Differential CQI fields                             | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 59  | 1   | PUSCH Power Control   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 60  | -   | RB restriction and modulation order for CQI-only transmission on PUSCH          | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 61  | -   | Modulation order determination for uplink retransmissions                       | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 62  | 2   | Introducing missing L1 parameters into 36.213                                   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 63  | 2   | Correcting the range and representation of delta_TF_PUCCH                       | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 64  | 1   | Adjusting TBS sizes to for VoIP   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 67  | -   | Correction to the downlink resource allocation                                  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 68  | -   | Removal of special handling for PUSCH mapping in PUCCH region                   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 69  | -   | Correction to the formulas for uplink power control                             | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 70  | 1   | Definition of Bit Mapping for DCI Signalling                                    | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 71  | -   | Clarification on PUSCH TPC commands   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 72  | 1   | Reference for CQI/PMI Reporting Offset  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 74  | -   | Correction to the downlink/uplink timing  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 75  | -   | Correction to the time alignment command  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 77  | 1   | Correction of offset signalling of UL Control information MCS                   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 78  | 2   | DCI format1C  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 80  | -   | Correction to Precoder Cycling for Open-loop Spatial Multiplexing               | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 81  | 1   | Clarifying Periodic CQI Reporting using PUCCH                                   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 84  | 1   | CQI reference measurement period  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 86  | -   | Correction on downlink multi-user MIMO  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 87  | -   | PUCCH Reporting   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 88  | 1   | Handling of Uplink Grant in Random Access Response                              | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 89  | -   | Correction to UL Hopping operation  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 90  | -   | DRS EPRE  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 92  | -   | Uplink ACK/NACK mapping for TDD   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 93  | -   | UL SRI Parameters Configuration   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 94  | -   | Miscellaneous updates for 36.213  | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 95  | -   | Clarifying Requirement for Max PDSCH Coding Rate                                | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 96  | -   | UE Specific SRS Configuration   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 97  | -   | DCI Format 1A changes needed for scheduling Broadcast Control                   | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 98  | -   | Processing of TPC bits in the random access response                            | 8.3.0 | 8.4.0 |
| 09/09/08       | RP-41 | RP-080670 | 100 | 1   | Support of multi-bit ACK/NAK transmission in TDD                                | 8.3.0 | 8.4.0 |
| 03/12/08       | RP-42 | RP-081075 | 82  | 3   | Corrections to RI for CQI reporting   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 83  | 2   | Moving description of large delay CDD to 36.211                                 | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 102 | 3   | Reception of DCI formats  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 105 | 8   | Alignment of RAN1/RAN2 specification  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 107 | 1   | General correction of reset of power control and random access response message | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 108 | 2   | Final details on codebook subset restrictions                                   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 109 | -   | Correction on the definition of Pmax  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 112 | 2   | CQI/PMI reference measurement periods   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 113 | -   | Correction of introduction of shortened SR                                      | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 114 | -   | RAN1/2 specification alignment on HARQ operation                                | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 115 | -   | Introducing other missing L1 parameters in 36.213                               | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 116 | -   | PDCCH blind decoding  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 117 | -   | PDCCH search space  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 119 | -   | Delta_TF for PUSCH  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 120 | -   | Delta_preamble_msg3 parameter values and TPC command in RA response             | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 122 | 1   | Correction of offset signaling of uplink control information MCS                | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 124 | -   | Miscellaneous Corrections   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 125 | -   | Clarification of the uplink index in TDD mode                                   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 126 | -   | Clarification of the uplink transmission configurations                         | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 127 | 2   | Correction to the PHICH index assignment  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 128 | -   | Clarification of type-2 PDSCH resource allocation for format 1C                 | 8.4.0 | 8.5.0 |

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|----------------|-------|-----------|-----|-----|---|-------|-------|
| Date           | TSG # | TSG Doc.  | CR  | Rev | Subject/Comment   | Old   | New   |
| 03/12/08       | RP-42 | RP-081075 | 129 | -   | Clarification of uplink grant in random access response   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 130 | -   | UE sounding procedure   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 134 | -   | Change for determining DCI format 1A TBS table column indicator for broadcast control   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 135 | -   | Clarifying UL VRB Allocation  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 136 | 1   | Correction for Aperiodic CQI  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 137 | 1   | Correction for Aperiodic CQI Reporting  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 138 | 1   | Correction to PUCCH CQI reporting mode for $N^{\text{DL}}_{\text{RB}} \leq 7$   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 140 | 1   | On sounding procedure in TDD  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 141 | 1   | Alignment of RAN1/RAN3 specification  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 143 | 1   | TTI bundling  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 144 | 1   | ACK/NACK transmission on PUSCH for LTE TDD  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 145 | 1   | Timing relationship between PHICH and its associated PUSCH  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 147 | 1   | Definition of parameter for downlink reference signal transmit power  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 148 | 1   | Radio link monitoring   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 149 | 1   | Correction in 36.213 related to TDD downlink HARQ processes   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 151 | -   | Nominal PDSCH-to-RS EPRE Offset for CQI Reporting   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 152 | 1   | Support of UL ACK/NAK repetition in Rel-8   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 155 | -   | Clarification of misconfiguration of aperiodic CQI and SR   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 156 | 1   | Correction of control information multiplexing in subframe bundling mode  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 157 | -   | Correction to the PHICH index assignment  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 158 | 1   | UE transmit antenna selection   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 159 | -   | Clarification of spatial different CQI for CQI reporting Mode 2-1   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 160 | 1   | Corrections for TDD ACK/NACK bundling and multiplexing  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 161 | -   | Correction to RI for Open-Loop Spatial Multiplexing   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 162 | -   | Correction of differential CQI  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 163 | -   | Inconsistency between PMI definition and codebook index   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 164 | -   | PDCCH validation for semi-persistent scheduling   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 165 | 1   | Correction to the UE behavior of PUCCH CQI piggybacked on PUSCH   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 166 | -   | Correction on SRS procedure when shortened PUCCH format is used   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 167 | 1   | Transmission overlapping of physical channels/signals with PDSCH for transmission mode 7  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 169 | -   | Clarification of SRS and SR transmission  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 171 | -   | Clarification on UE behavior when skipping decoding   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 172 | 1   | PUSCH Hopping operation corrections   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 173 | -   | Clarification on message 3 transmission timing  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 174 | -   | MCS handling for DwPTS  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 175 | -   | Clarification of UE-specific time domain position for SR transmission   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 176 | 1   | Physical layer parameters for CQI reporting   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 177 | -   | A-periodic CQI clarification for TDD UL/DL configuration 0  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 179 | 1   | Correction to the definitions of $\rho_A$ and $\rho_B$ (downlink power allocation)  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 180 | -   | Clarification of uplink A/N resource indication   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 181 | -   | PDCCH format 0 for message 3 adaptive retransmission and transmission of control information in message 3 during contention based random access procedure | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081075 | 182 | -   | To Fix the Discrepancy of Uplink Power Control and Channel Coding of Control Information in PUSCH   | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081122 | 183 | 1   | CQI reporting for antenna port 5  | 8.4.0 | 8.5.0 |
| 03/12/08       | RP-42 | RP-081110 | 168 | 1   | Clarification on path loss definition   | 8.4.0 | 8.5.0 |
| 04/03/09       | RP-43 | RP-090236 | 184 | 1   | Corrections to Transmitted Rank Indication  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 185 | 4   | Corrections to transmission modes   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 186 | 2   | Delta <sub>TF</sub> configuration for control only PUSCH  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 187 | 1   | Correction to concurrent SRS and ACK/NACK transmission  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 191 | 1   | PDCCH release for semi-persistent scheduling  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 192 | 1   | Correction on ACK/NACK transmission on PUSCH for LTE TDD  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 193 | -   | Correction to subband differential CQI value to offset level mapping for aperiodic CQI reporting  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 194 | -   | Correction for DRS Collision handling   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 196 | 2   | Alignment of RAN1/RAN4 specification on UE maximum output power   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 197 | -   | Transmission scheme for transmission mode 7 with SPS C-RNTI   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 198 | -   | Clarifying bandwidth parts for periodic CQI reporting and CQI reference period  | 8.5.0 | 8.6.0 |

| Change history |       |           |     |     |   |       |       |
|----------------|-------|-----------|-----|-----|---|-------|-------|
| Date           | TSG # | TSG Doc.  | CR  | Rev | Subject/Comment   | Old   | New   |
| 04/03/09       | RP-43 | RP-090236 | 199 | 2   | Correction to the ACK/NACK bundling in case of transmission mode 3 and 4  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 200 | -   | ACK/NAK repetition for TDD ACK/NAK multiplexing   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 201 | -   | Clarifying UL ACK/NAK transmission in TDD   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 202 | -   | Corrections to UE Transmit Antenna Selection  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 203 | -   | Correction to UE PUSCH hopping procedure  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 204 | -   | Correction to PHICH resource association in TTI bundling  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 205 | -   | Clarification of the length of resource assignment  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 206 | -   | Correction on ACK/NACK transmission for downlink SPS resource release   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 207 | -   | Introduction of additional values of wideband CQI/PMI periodicities   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 208 | 2   | Correction to CQI/PMI/RI reporting field  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 209 | 2   | Correction to rho A definition for CQI calculation  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 210 | -   | Correction to erroneous cases in PUSCH linear block codes   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 211 | 1   | Removing RL monitoring start and stop   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 214 | 1   | Correction to type-1 and type-2 PUSCH hopping   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 215 | -   | Contradicting statements on determination of CQI subband size   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 216 | -   | Corrections to SRS  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 219 | 2   | Miscellaneous corrections on TDD ACKNACK  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 221 | 1   | CR for Redundancy Version mapping function for DCI 1C   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 223 | -   | Scrambling of PUSCH corresponding to Random Access Response Grant   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 225 | -   | Removal of SRS with message 3   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 226 | 3   | PRACH retransmission timing   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 227 | -   | Clarifying error handling of PDSCH and PUSCH assignments  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 228 | -   | Clarify PHICH index mapping   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 229 | -   | Correction of CQI timing  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 230 | -   | Alignment of CQI parameter names with RRC   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 231 | 1   | Removal of 'Off' values for periodic reporting in L1  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 232 | -   | Default value of RI   | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 233 | 1   | Clarification of uplink timing adjustments  | 8.5.0 | 8.6.0 |
| 04/03/09       | RP-43 | RP-090236 | 234 | -   | Clarification on ACK/NAK repetition   | 8.5.0 | 8.6.0 |
| 27/05/09       | RP-44 | RP-090529 | 235 | 1   | Correction to the condition of resetting accumulated uplink power correction  | 8.6.0 | 8.7.0 |
| 27/05/09       | RP-44 | RP-090529 | 236 | -   | Correction to the random access channel parameters received from higher layer   | 8.6.0 | 8.7.0 |
| 27/05/09       | RP-44 | RP-090529 | 237 | -   | Correction on TDD ACKNACK   | 8.6.0 | 8.7.0 |
| 27/05/09       | RP-44 | RP-090529 | 238 | 1   | Correction on CQI reporting   | 8.6.0 | 8.7.0 |
| 27/05/09       | RP-44 | RP-090529 | 239 | -   | Correction on the HARQ process number   | 8.6.0 | 8.7.0 |
| 27/05/09       | RP-44 | RP-090529 | 241 | 1   | CR correction of the description on TTI-bundling  | 8.6.0 | 8.7.0 |
| 27/05/09       | RP-44 | RP-090529 | 242 | 1   | Clarify latest and initial PDCCH for PDSCH and PUSCH transmissions, and NDI for SPS activation                                | 8.6.0 | 8.7.0 |
| 27/05/09       | RP-44 | RP-090529 | 243 | -   | Clarify DRS EPRE  | 8.6.0 | 8.7.0 |
| 27/05/09       | RP-44 | RP-090529 | 244 | 1   | Clarification on TPC commands for SPS   | 8.6.0 | 8.7.0 |
| 15/09/09       | RP-45 | RP-090888 | 245 | 1   | Correction to PUSCH hopping and PHICH mapping procedures  | 8.7.0 | 8.8.0 |
| 15/09/09       | RP-45 | RP-090888 | 246 | -   | Clarification on subband indexing in periodic CQI reporting   | 8.7.0 | 8.8.0 |
| 15/09/09       | RP-45 | RP-090888 | 247 | 2   | Correction to DVRB operation in TDD transmission mode 7   | 8.7.0 | 8.8.0 |
| 15/09/09       | RP-45 | RP-090888 | 249 | -   | Clarification of concurrent ACKNACK and periodic PMI/RI transmission on PUCCH for TDD   | 8.7.0 | 8.8.0 |
| 15/09/09       | RP-45 | RP-090888 | 250 | -   | Clarify Inter-cell synchronization text   | 8.7.0 | 8.8.0 |
| 01/12/09       | RP-46 | RP-091172 | 248 | 1   | Introduction of LTE positioning   | 8.8.0 | 9.0.0 |
| 01/12/09       | RP-46 | RP-091172 | 254 | -   | Clarification of PDSCH and PRS in combination for LTE positioning   | 8.8.0 | 9.0.0 |
| 01/12/09       | RP-46 | RP-091177 | 255 | 5   | Editorial corrections to 36.213   | 8.8.0 | 9.0.0 |
| 01/12/09       | RP-46 | RP-091257 | 256 | 1   | Introduction of enhanced dual layer transmission  | 8.8.0 | 9.0.0 |
| 01/12/09       | RP-46 | RP-091177 | 257 | 1   | Add shorter SR periodicity  | 8.8.0 | 9.0.0 |
| 01/12/09       | RP-46 | RP-091256 | 258 | -   | Introduction of LTE MBMS  | 8.8.0 | 9.0.0 |
| 17/12/09       | RP-46 | RP-091257 | 256 | 1   | Correction by MCC due to wrong implementation of CR0256r1 – Sentence is added to Single-antenna port scheme subclause 7.1.1   | 9.0.0 | 9.0.1 |
| 16/03/10       | RP-47 | RP-100211 | 259 | 3   | UE behavior when collision of antenna port 7/8 with PBCH or SCH happened and when distributed VRB is used with antenna port 7 | 9.0.1 | 9.1.0 |
| 16/03/10       | RP-47 | RP-100210 | 260 | 1   | MCCH change notification using DCI format 1C  | 9.0.1 | 9.1.0 |
| 16/03/10       | RP-47 | RP-100211 | 263 | -   | Correction on PDSCH EPRE and UE-specific RS EPRE for Rel-9 enhanced DL transmissions  | 9.0.1 | 9.1.0 |
| 01/06/10       | RP-48 | RP-100589 | 265 | -   | Clarification for TDD when multiplexing ACK/NACK with SR of ACK/NACK with CQI/PMI or RI                                       | 9.1.0 | 9.2.0 |
| 01/06/10       | RP-48 | RP-100590 | 268 | 1   | Clarification of PRS EPRE   | 9.1.0 | 9.2.0 |

| Change history |       |           |     |     |   |        |        |
|----------------|-------|-----------|-----|-----|---|--------|--------|
| Date           | TSG # | TSG Doc.  | CR  | Rev | Subject/Comment   | Old    | New    |
| 14/09/10       | RP-49 | RP-100900 | 269 | -   | Clarification on Extended CP support with Transmission Mode 8   | 9.2.0  | 9.3.0  |
| 07/12/10       | RP-50 | RP-101320 | 270 | -   | Introduction of Rel-10 LTE-Advanced features in 36.213  | 9.3.0  | 10.0.0 |
| 27/12/10       | -     | -         | -   | -   | Editorial change to correct a copy/past error in subclause 7.2.2  | 10.0.0 | 10.0.1 |
| 15/03/11       | RP-51 | RP-110255 | 271 | 1   | A clarification for redundancy version of PMCH  | 10.0.1 | 10.1.0 |
| 15/03/11       | RP-51 | RP-110258 | 272 | -   | RLM Procedure with restricted measurements  | 10.0.1 | 10.1.0 |
| 15/03/11       | RP-51 | RP-110256 | 273 | -   | Corrections to Rel-10 LTE-Advanced features in 36.213   | 10.0.1 | 10.1.0 |
| 01/06/11       | RP-52 | RP-110819 | 274 | 3   | Correction to HARQ-ACK procedure for TDD mode b with M=2  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 275 | 3   | Determination of PUSCH A/N codebook size for TDD  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110823 | 276 | -   | The triggering of aperiodic SRS in DCI formats 2B and 2C  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 278 | 3   | Corrections to power headroom   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 279 | 1   | Removal of square brackets for PUCCH format 3 ACK/NACK  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 281 | 1   | Correction of AN repetition and PUCCH format 3  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 282 | 2   | Correction to timing for secondary cell activation and deactivation   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110823 | 283 | 1   | Correction to MCS offset for multiple TBs   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110820 | 286 | 1   | Miscellaneous Corrections   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 288 | 1   | Corrections on UE procedure for determining PUCCH Assignment  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 289 | 2   | Correction to Multi-cluster flag in DCI format 0  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 290 | 2   | Joint transmission of ACK/NACK and SR with PUCCH format 3   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 291 | 3   | Correction of uplink resource allocation type 1   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110821 | 292 | 1   | Correction on CSI-RS configuration  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110818 | 294 | -   | ACK/NACK and CQI simultaneous transmission in ACK/NACK bundling in TDD  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110823 | 295 | -   | UE specific disabling of UL DMRS sequence hopping   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110821 | 296 | -   | PDSCH transmission in MBSFN subframes   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 297 | -   | Introduction of PCMAX for PUSCH power scaling   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 298 | -   | Power control for SR and ACK/NACK with PUCCH format 3   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 299 | 2   | CR on power control for HARQ-ACK transmission on PUCCH  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 300 | 2   | Correction to handling of search space overlap  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 301 | 1   | Correction to simultaneous transmission of SRS and PUCCH format 2/2a/2b   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 302 | 1   | Correction for Simultaneous PUCCH and SRS Transmissions on CA   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110821 | 303 | -   | Correction on 8Tx Codebook Sub-sampling for PUCCH Mode 1-1  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110821 | 304 | 1   | Corrections on CQI type in PUCCH mode 2-1 and clarification on simultaneous PUCCH and PUSCH transmission for UL-SCH subframe bundling | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110818 | 305 | 1   | Correction on UE behaviour upon reporting periodic CSI using PUCCH Mode1-1  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110818 | 306 | -   | Clarification for the definition of CQI   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110818 | 307 | -   | Clarification for the definition of Precoding Matrix Indicator  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 308 | -   | Simultaneous SRS transmissions in more than one cell  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 310 | 1   | Miscellaneous Corrections for TS 36.213   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110821 | 311 | 1   | Configuration of pmi-RI-Report  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 312 | 1   | Correction on the support of PUCCH format 3 and channel selection   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110821 | 313 | -   | Correction on UE behaviour during DM-RS transmission on subframes carrying synchronization signals                                    | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110820 | 314 | 1   | 36.213 CR on antenna selection  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110823 | 316 | 1   | Number of HARQ process for UL spatial multiplexing  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 317 | -   | PUCCH format 3 Fallback procedure in TDD  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 318 | -   | Clarification on CSI reporting under an invalid downlink subframe   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 320 | -   | Multiple Aperiodic SRS Triggers for Same Configuration  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110823 | 321 | -   | UE antenna switch in UL MIMO  | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110819 | 322 | -   | UE behaviour for PDSCH reception with limited soft buffer in CA   | 10.1.0 | 10.2.0 |
| 01/06/11       | RP-52 | RP-110859 | 323 | -   | Joint transmission of ACK/NACK and SR or CSI with PUCCH format 3 and channel selection  | 10.1.0 | 10.2.0 |
| 15/09/11       | RP-53 | RP-111229 | 277 | 1   | Correction to reception of PRS in MBSFN subframes   | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111230 | 325 | 3   | Corrections on UE procedure for reporting HARQ-ACK  | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111230 | 326 | 2   | Corrections on Physical Uplink Control Channel Procedure  | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111231 | 331 | 1   | Correction to uplink transmission scheme usage for random access response and PHICH-triggered retransmissions                         | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111229 | 336 | -   | Corrections on transmission mode 9  | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111230 | 339 | -   | Corrections on HARQ-ACK codebook size determination   | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111230 | 340 | -   | Corrections on TDD PUCCH format 1b with channel selection and HARQ-ACK transmission on PUSCH  | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111230 | 341 | -   | Corrections on NACK generation  | 10.2.0 | 10.3.0 |

| Change history |       |           |     |     |  |        |        |
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| Date           | TSG # | TSG Doc.  | CR  | Rev | Subject/Comment  | Old    | New    |
| 15/09/11       | RP-53 | RP-111230 | 342 | -   | Corrections on power headroom reporting  | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111229 | 346 | -   | Correction on TBS translation table  | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111229 | 347 | 2   | Correction to the condition of enabling PMI feedback   | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111232 | 348 | -   | Miscellaneous corrections to 36.213  | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111229 | 349 | -   | Corrections on PUSCH and PUCCH modes   | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111231 | 350 | 1   | CR on UL HARQ ACK determination  | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111231 | 351 | 1   | Correction on UL DMRS resources for PHICH-triggered retransmission   | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111230 | 352 | -   | Clarification on the common search space description   | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111232 | 353 | 1   | Clarification on ambiguous DCI information between UE-specific search space and common search space for DCI formats 0 and 1A | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111229 | 354 | -   | Clarification of Reference PDSCH Power for CSI-RS based CSI Feedback   | 10.2.0 | 10.3.0 |
| 15/09/11       | RP-53 | RP-111230 | 355 | 2   | Corrections on reporting Channel State Information   | 10.2.0 | 10.3.0 |
| 05/12/11       | RP-54 | RP-111669 | 324 | 3   | Accumulation of power control commands from DCI format 3/3A  | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 357 | 1   | Miscellaneous corrections on uplink power control  | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 358 | -   | Corrections on $N_c$ (received)  | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 359 | -   | Corrections on TDD PUCCH format 1b with channel selection and two configured serving cells                                   | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 360 | -   | Corrections on the notation of $k$ and $k_m$   | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111668 | 361 | 1   | Corrections on PUCCH mode 2-1  | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111668 | 362 | 3   | A correction to PDSCH transmission assumption for CQI calculation  | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 363 | 1   | Corrections on PUCCH Resource Notation   | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111667 | 364 | -   | Correction on the notation of SRS transmission comb  | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 365 | -   | Clarification on the HARQ-ACK procedure of TDD UL-DL configuration 5   | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 366 | 2   | Clarification on the determination of resource for PUCCH Format 1b with channel selection in TDD mode                        | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 367 | 1   | Correction on HARQ-ACK procedure   | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 368 | -   | Correction for A/N on PUSCH with $W=1,2$ in case of TDD channel selection  | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111668 | 369 | -   | Clarification of PUCCH 2-1 Operation   | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111668 | 370 | 1   | Correction on PMI index  | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 371 | 2   | Correction to periodic CSI reports for carrier aggregation   | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 373 | 1   | Removal of square bracket in HARQ-ACK procedure  | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 374 | 1   | Clarification on UE's capability of supporting PUCCH format 3  | 10.3.0 | 10.4.0 |
| 05/12/11       | RP-54 | RP-111666 | 375 | 1   | Clarifications of UE behavior on PUSCH power control   | 10.3.0 | 10.4.0 |
| 28/02/12       | RP-55 | RP-120286 | 376 | 1   | RNTI Configuration associated with DL Resource Allocation Type 2   | 10.4.0 | 10.5.0 |
| 28/02/12       | RP-55 | RP-120283 | 377 | 2   | Correction for ACK/NACK related procedure in case of TDD UL-DL configuration 0   | 10.4.0 | 10.5.0 |
| 13/06/12       | RP-56 | RP-120737 | 378 | 3   | Correction of FDD channel selection HARQ-ACK and SR transmission   | 10.5.0 | 10.6.0 |
| 13/06/12       | RP-56 | RP-120738 | 379 | -   | Removal of description with square brackets  | 10.5.0 | 10.6.0 |
| 13/06/12       | RP-56 | RP-120738 | 381 | -   | Correction on transmission mode 9 with a single antenna port transmission  | 10.5.0 | 10.6.0 |
| 04/09/12       | RP-57 | RP-121265 | 382 | -   | Clarification of codebook subsampling for PUCCH 2-1  | 10.6.0 | 10.7.0 |
| 04/09/12       | RP-57 | RP-121266 | 383 | -   | Correction to UE transmit antenna selection  | 10.6.0 | 10.7.0 |
| 04/09/12       | RP-57 | RP-121264 | 384 | -   | TDD HARQ-ACK procedure for PUCCH format 1b with channel selection in carrier aggregation                                     | 10.6.0 | 10.7.0 |
| 04/09/12       | RP-57 | RP-121265 | 385 | -   | Corrections for Handling CSI-RS patterns   | 10.6.0 | 10.7.0 |
| 04/09/12       | RP-57 | RP-121264 | 386 | 1   | Reference serving cell for pathloss estimation   | 10.6.0 | 10.7.0 |
| 04/09/12       | RP-57 | RP-121264 | 387 | -   | Power control for PUCCH format 3 with single configured cell   | 10.6.0 | 10.7.0 |
| 04/09/12       | RP-57 | RP-121264 | 388 | -   | ACK/NACK resource in case of channel selection   | 10.6.0 | 10.7.0 |
| 04/09/12       | RP-57 | RP-121274 | 380 | 4   | Introduction of an additional special subframe configuration   | 10.7.0 | 11.0.0 |
| 04/09/12       | RP-57 | RP-121272 | 389 | -   | Introduction of Rel-11 features  | 10.7.0 | 11.0.0 |
| 04/12/12       | RP-58 | RP-121839 | 393 | -   | Correction to the parameter ue-Category-v10xy  | 11.0.0 | 11.1.0 |
| 04/12/12       | RP-58 | RP-121837 | 395 | -   | Correction of reference signal scrambling sequence initialization for SPS in transmission mode 7                             | 11.0.0 | 11.1.0 |
| 04/12/12       | RP-58 | RP-121846 | 396 | -   | Finalisation for introducing Rel-11 features   | 11.0.0 | 11.1.0 |
| 26/02/13       | RP-59 | RP-130254 | 398 | -   | Correction on UE procedure for reporting HARQ-ACK  | 11.1.0 | 11.2.0 |
| 26/02/13       | RP-59 | RP-130252 | 400 | -   | Corrections for SRS power scaling in UpPTS   | 11.1.0 | 11.2.0 |
| 26/02/13       | RP-59 | RP-130252 | 403 | -   | CR on UE specific search and Common search space overlap on PDCCH  | 11.1.0 | 11.2.0 |
| 26/02/13       | RP-59 | RP-130358 | 404 | -   | Additional clarifications/corrections for introducing Rel-11 features  | 11.1.0 | 11.2.0 |
| 11/06/13       | RP-60 | RP-130752 | 405 | -   | Correction to EPDCCH monitoring in case of cross-carrier scheduling  | 11.2.0 | 11.3.0 |

| Change history |       |           |     |     |  |        |        |
|----------------|-------|-----------|-----|-----|--|--------|--------|
| Date           | TSG # | TSG Doc.  | CR  | Rev | Subject/Comment  | Old    | New    |
| 11/06/13       | RP-60 | RP-130751 | 407 | 1   | Correction on the RI bit width   | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130750 | 408 | -   | Correction on parallel reception of PDSCH and Msg 2  | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130747 | 409 | -   | Correction on zero power CSI-RS resource configuration   | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130750 | 410 | 1   | Corrections on different TDD UL-DL configurations on different bands   | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130752 | 411 | -   | Correction on EPDCCH PRB pair indication   | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130752 | 412 | -   | Correction on EPDCCH hashing function  | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130752 | 413 | -   | Correction on PUCCH resource determination for FDD EPDCCH  | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130752 | 414 | 2   | CR on ambiguity in EPDCCH decoding candidates under two overlapped EPDCCH resource sets  | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130749 | 415 | -   | Removal of the case for spatial domain bundling in TDD UL/DL configuration 0   | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130752 | 416 | -   | Corrections to EPDCCH PRB pair indication  | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130753 | 417 | 1   | Correction to PUSCH/PUCCH transmit power after PRACH power ramping   | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130747 | 418 | -   | CR on RI-Reference CSI Process with Subframe Sets  | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130747 | 420 | -   | Correction on UE-specific RS scrambling for SPS PDSCH in TM10  | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130747 | 421 | -   | CR on resolving ambiguous UE capability signaling for CoMP   | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130750 | 422 | -   | Correction of valid downlink subframe  | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130749 | 424 | -   | Correction on HARQ-ACK transmission for a UE configured with PUCCH format 3  | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130750 | 425 | -   | Correction of PHICH resource for half duplex TDD UE  | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130750 | 426 | -   | Correction on $n_{\text{HARQ}}$ for TDD CA with different UL-DL configurations   | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130750 | 427 | -   | Correction on implicit HARQ-ACK resource determination for PUCCH format 1b with channel selection for TDD CA with different UL-DL configurations | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130750 | 428 | -   | Correction on SRS power scaling with multiple TAGs   | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130747 | 429 | -   | Correction on MBSFN subframe configuration   | 11.2.0 | 11.3.0 |
| 11/06/13       | RP-60 | RP-130749 | 430 | -   | CR on SCell activation timing  | 11.2.0 | 11.3.0 |
| 03/09/13       |       |           |     |     | MCC clean-up   | 11.3.0 | 11.4.0 |
| 03/09/13       | RP-61 | RP-131249 | 432 | -   | Correction for EPDCCH Search Space   | 11.3.0 | 11.4.0 |
| 03/09/13       | RP-61 | RP-131250 | 433 | -   | Correction to QCL behaviour on CRS   | 11.3.0 | 11.4.0 |
| 03/09/13       | RP-61 | RP-131250 | 434 | -   | Correction on PUCCH power control  | 11.3.0 | 11.4.0 |
| 03/09/13       | RP-61 | RP-131248 | 435 | -   | Correction on the ratio of PDSCH EPRE to CRS EPRE for TM10   | 11.3.0 | 11.4.0 |
| 03/09/13       | RP-61 | RP-131249 | 436 | -   | CR on EPDCCH Search Space for Cross-Carrier Scheduling   | 11.3.0 | 11.4.0 |
| 03/09/13       | RP-61 | RP-131249 | 437 | -   | Correction to the UE behaviour in case of collision between PRS and EPDCCH in different CP case  | 11.3.0 | 11.4.0 |
| 03/09/13       | RP-61 | RP-131249 | 438 | -   | On correction to higher layer parameter name for EPDCCH resource mapping   | 11.3.0 | 11.4.0 |
| 03/09/13       | RP-61 | RP-131248 | 439 | -   | Correction to PDSCH mapping for CoMP   | 11.3.0 | 11.4.0 |
| 03/12/13       | RP-62 | RP-131893 | 440 | 1   | Correction on parameter ue-Category  | 11.4.0 | 11.5.0 |
| 03/12/13       | RP-62 | RP-131892 | 442 | 1   | Correction on determination of modulation order and transport block size   | 11.4.0 | 11.5.0 |
| 03/12/13       | RP-62 | RP-132024 | 445 | 3   | Correction on CSI reporting type and parameters  | 11.4.0 | 11.5.0 |
| 03/12/13       | RP-62 | RP-131894 | 446 | -   | Correction on deriving the length of the non-MBSFN region  | 11.4.0 | 11.5.0 |
| 03/12/13       | RP-62 | RP-131896 | 431 | 5   | Introduction of Rel 12 feature for Downlink MIMO Enhancement   | 11.5.0 | 12.0.0 |
| 03/03/14       | RP-63 | RP-140286 | 447 | -   | Correction to CSI Reporting  | 12.0.0 | 12.1.0 |
| 03/03/14       | RP-63 | RP-140291 | 448 | -   | Clarification on PUCCH Mode 1-1 for 4Tx Dual Codebook  | 12.0.0 | 12.1.0 |
| 03/03/14       | RP-63 | RP-140287 | 450 | 1   | Common search space monitoring for MBMS  | 12.0.0 | 12.1.0 |
| 03/03/14       | RP-63 | RP-140290 | 452 | -   | Introduction of new UE categories  | 12.0.0 | 12.1.0 |
| 03/03/14       | RP-63 | RP-140288 | 455 | 1   | Modification to $I_{\text{SRS}} = 0$ for trigger type 1 SRS and TDD  | 12.0.0 | 12.1.0 |
| 03/03/14       | RP-63 | RP-140289 | 458 | -   | Correction to CSI processing in TM10   | 12.0.0 | 12.1.0 |
| 10/06/14       | RP-64 | RP-140858 | 459 | 1   | Clarification on PUCCH reporting type payload size   | 12.1.0 | 12.2.0 |
| 10/06/14       | RP-64 | RP-140858 | 461 | -   | Clarification on SRS colliding with PUCCH in the same cell when the UE is configured with multiple TAGs  | 12.1.0 | 12.2.0 |
| 10/06/14       | RP-64 | RP-140858 | 462 | 1   | Clarification on SRS antenna switching   | 12.1.0 | 12.2.0 |
| 10/06/14       | RP-64 | RP-140862 | 463 | -   | Introduction of Rel-12 LTE-Advanced features in 36.213   | 12.1.0 | 12.2.0 |
| 10/09/14       | RP-65 | RP-141479 | 464 | -   | Correction on SRS transmission for TDD-FDD CA  | 12.2.0 | 12.3.0 |
| 10/09/14       | RP-65 | RP-141478 | 465 | -   | Correction on $\beta_{\text{offset}}^{\text{HARQ-ACK}}$ determination for a UE configured with two uplink power control subframe sets            | 12.2.0 | 12.3.0 |
| 10/09/14       | RP-65 | RP-141478 | 466 | -   | Corrections for TDD eIMTA  | 12.2.0 | 12.3.0 |
| 10/09/14       | RP-65 | RP-141479 | 467 | 3   | CR on HARQ-ACK Multiplexing in PUSCH for TDD-FDD CA  | 12.2.0 | 12.3.0 |
| 10/09/14       | RP-65 | RP-141474 | 469 | -   | Correction to UCI embedding in case of a single serving cell and simultaneous PUSCH and PUCCH transmission                                       | 12.2.0 | 12.3.0 |
| 10/09/14       | RP-65 | RP-141478 | 470 | -   | Corrections on UL-reference UL/DL configuration  | 12.2.0 | 12.3.0 |
| 10/09/14       | RP-65 | RP-141473 | 471 | -   | CR for Clarification of special subframe and usage alignment   | 12.2.0 | 12.3.0 |

| Change history |            |           |     |     |   |        |        |
|----------------|------------|-----------|-----|-----|---|--------|--------|
| Date           | TSG #      | TSG Doc.  | CR  | Rev | Subject/Comment   | Old    | New    |
| 10/09/14       | RP-65      | RP-141485 | 472 | -   | Introduction of low-cost MTC and 256QAM features  | 12.2.0 | 12.3.0 |
| 08/12/14       | RP-66      | RP-142104 | 482 | 5   | Introduction of Dual Connectivity, Small Cell Enhancements, NAICS, eIMTA, and TDD-FDD CA features                         | 12.3.0 | 12.4.0 |
| 08/12/14       | RP-66      | RP-142097 | 487 | 1   | Clarification of periodic CSI feedback for subband CQI and PMI  | 12.3.0 | 12.4.0 |
| 08/12/14       | RP-66      | RP-142100 | 491 | -   | Correction of the parameter CSIProcessIndex   | 12.3.0 | 12.4.0 |
| 09/03/15       | RP-67      | RP-150366 | 492 | 2   | Introduction of D2D feature into 36.213   | 12.4.0 | 12.5.0 |
| 09/03/15       | RP-67      | RP-150363 | 494 | 1   | Correction to PUCCH procedures in case of FDD Pcell and TDD SCell in TDD-FDD CA   | 12.4.0 | 12.5.0 |
| 09/03/15       | RP-67      | RP-150364 | 498 | -   | Correction on higher layer parameter names for 256QAM   | 12.4.0 | 12.5.0 |
| 09/03/15       | RP-67      | RP-150359 | 500 | -   | TM10 CSI-IM Interference Measurements   | 12.4.0 | 12.5.0 |
| 09/03/15       | RP-67      | RP-150358 | 502 | -   | Clarification on common search reception related to MBMS  | 12.4.0 | 12.5.0 |
| 09/03/15       | RP-67      | RP-150364 | 503 | -   | Correction to Discovery in Small Cell Enhancement feature   | 12.4.0 | 12.5.0 |
| 09/03/15       | RP-67      | RP-150365 | 504 | 1   | Corrections to Dual Connectivity feature  | 12.4.0 | 12.5.0 |
| 15/06/15       | RP-68      | RP-150931 | 493 | 2   | Clarification on HARQ-ACK repetition  | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150932 | 497 | 3   | Clarification on PUCCH Format 3 Resource Derivation for TDD UL/DL Configuration 5   | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150933 | 506 | -   | Clarification on the PRACH power in subframe i2-1 for PCM2  | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150933 | 507 | -   | Clarification on the MTA operation in PCM1  | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150933 | 512 | -   | Correction of higher layer parameter names in dual connectivity   | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150935 | 513 | 1   | Correction on UE procedure of determining subframe pool for PSCCH and PSSCH in ProSe                                      | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150935 | 514 | 1   | Correction on UE procedure of transmitting PSCCH in ProSe   | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150933 | 515 | 1   | Correction on UL Power Control for Synchronous Dual Connectivity  | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150933 | 516 | 1   | Correction on UL Power Control for Asynchronous Dual Connectivity   | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150937 | 517 | -   | Correction to Rel-12 UE category signal name  | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150936 | 520 | -   | Corrections on eIMTA RRC parameter naming   | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150933 | 521 | -   | Correction on Closed Loop Antenna Selection for Dual Connectivity   | 12.5.0 | 12.6.0 |
| 15/06/15       | RP-68      | RP-150935 | 523 | -   | Alignment of ProSe parameter names  | 12.5.0 | 12.6.0 |
| 14/09/15       | RP-69      | RP-151470 | 525 | -   | UE processing time relaxation on Type 2 Power Headroom Reporting  | 12.6.0 | 12.7.0 |
| 14/09/15       | RP-69      | RP-151468 | 527 | -   | Correction of ProSe parameters  | 12.6.0 | 12.7.0 |
| 14/09/15       | RP-69      | RP-151471 | 528 | 2   | Clarification on power control for PCM2   | 12.6.0 | 12.7.0 |
| 07/12/15       | RP-70      | RP-152034 | 530 | 1   | Clarification of PUCCH resource allocation related to EPDCCH SCells   | 12.7.0 | 12.8.0 |
| 07/12/15       | RP-70      | RP-152037 | 531 | -   | Clarification on the parameter notations for eIMTA  | 12.7.0 | 12.8.0 |
| 07/12/15       | RP-70      | RP-152037 | 534 | -   | Correction on aperiodic CSI transmission without UL-SCH according to table 7.2.1-1C                                       | 12.7.0 | 12.8.0 |
| 07/12/15       | RP-70      | RP-152038 | 535 | 1   | Introduction of new maximum TBS for TM9/10  | 12.7.0 | 12.8.0 |
| 07/12/15       | RP-70      | RP-152034 | 542 | -   | Clarification of PHICH resource assignment related to EPDCCH scheduled PUSCH  | 12.7.0 | 12.8.0 |
| 07/12/15       | RP-70      | RP-152036 | 543 | 1   | Modify max TA for dual connectivity   | 12.7.0 | 12.8.0 |
| 07/12/15       | RP-70      | RP-152125 | 533 | 3   | eD2D CR for 36.213  | 12.8.0 | 13.0.0 |
| 07/12/15       | RP-70      | RP-152031 | 536 | -   | Introduction of Rel 13 features for SC-PTM  | 12.8.0 | 13.0.0 |
| 07/12/15       | RP-70      | RP-152026 | 537 | 2   | Introduction of LAA (PHY layer aspects)   | 12.8.0 | 13.0.0 |
| 07/12/15       | RP-70      | RP-152026 | 538 | 5   | Introduction of LAA (eNB Channel Access Procedures)   | 12.8.0 | 13.0.0 |
| 07/12/15       | RP-70      | RP-152027 | 539 | 1   | Introduction of Enhanced CA in Release 13   | 12.8.0 | 13.0.0 |
| 07/12/15       | RP-70      | RP-152025 | 541 | 1   | Introduction of EB/FD-MIMO  | 12.8.0 | 13.0.0 |
| 26/01/16       | Post RP-70 |           |     |     | MCC update to show correct version of the spec in the headers of all subparts and get all of them aligned with coversheet | 13.0.0 | 13.0.1 |



| Change history |                |           |      |         |     |   |                |
|----------------|----------------|-----------|------|---------|-----|---|----------------|
| Date           | Meeting        | TDoc      | CR   | R<br>ev | Cat | Subject/Comment   | New<br>version |
| 2016-03        | RAN#71         | RP-160359 | 546  | -       | F   | Alignment eD2D CR for 36.213  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160549 | 548  | 3       | F   | Clarification on PDSCH collision with PSS/SSS/PBCH  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 550  | 1       | F   | Clarification on number of PRBs for PUCCH format 4  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 554  | 2       | F   | Clarification on code rate for periodic CSI transmission on PUCCH format 4 and 5  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 555  | 1       | F   | Clarification on Averaging of CSI Measurements in LAA   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 559  | -       | F   | Limit on number of periodic CSI reports   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 560  | 1       | F   | Correction on Transmission Code Rate Determination  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 562  | -       | F   | CR on LAA defer and sensing duration  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 563  | -       | F   | Correction on aperiodic CSI only PUSCH without UL-SCH   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 564  | -       | F   | Correction on HARQ-ACK and periodic CSI transmission  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 565  | -       | F   | Correction on Simultaneous HARQ-ACK and P-CSI Transmission  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 566  | 1       | F   | CR on MR support in TM9   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 568  | -       | F   | Correction on Subsampling of Class A Codebook   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 569  | -       | F   | CR on definition of LAA idle sensing for periods longer than one CCA slot   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 570  | -       | F   | Correction on total sensing and transmission time for Japan   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 571  | -       | F   | Correction on common DCI detection of LAA in 36.213   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 572  | -       | F   | CR on valid downlink subframe definition for TM9/10   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 573  | -       | F   | CR on eCCE of EPDCCH for partial subframe   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 576  | -       | F   | Correction on cross-carrier scheduling in LAA   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 577  | -       | F   | Correction on QCL type B for LAA  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 578  | -       | F   | Correction on Class B CSI reporting   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 579  | -       | F   | CR on CRI reporting for one CSI-RS ports (36.213)   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 580  | -       | F   | Correction to the condition of CRI updating restriction   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 581  | -       | F   | Correction to the additional UpPTS symbols for SRS  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 582  | -       | F   | Clarification on PUCCH mode 1-1 configuration   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 584  | -       | F   | Correction on EPDCCH assignment in LAA  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 585  | -       | F   | CR for LAA CW reset per AC in case of K attempts at CWmax   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 586  | -       | F   | Corrections to RI-inheritance   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 587  | -       | F   | CR on CSI-RS resource in 36.213   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 588  | -       | F   | CR on mismatch between 36.213 and 36.331  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 589  | -       | F   | Correction on CSI transmission for eCA in 36.213  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 590  | -       | F   | Clarification on joint reports of CRI   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 591  | -       | F   | Correction to RI reference CSI process  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 592  | -       | F   | Corrections to Class B CSI reporting on PUCCH   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 594  | -       | F   | Correction on PUCCH transmission and (E)PDCCH disabling in eCA  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 595  | -       | F   | CSI-RS in DwPTS   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 596  | 1       | F   | Correction on shortened PUCCH format for Rel-13 CA  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160357 | 598  | -       | F   | Correction on HARQ-ACK bit concatenation for PUCCH format 4 and 5   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 599  | -       | F   | Corrections for LAA Energy Detection Threshold  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 0600 | -       | F   | Correction on channel access procedure for DL LBT   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 0601 | -       | F   | Correction on CWS adjustment in LAA   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 0602 | -       | F   | Corrections for Type B Multi-channel access procedure for an LAA SCell  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160358 | 0603 | -       | F   | CR on Class B CQI measurement correction  | 13.1.0         |
| 2016-03        | RAN#71         | RP-160360 | 0604 | 1       | F   | Corrections for PDCCH and EPDCCH monitoring on an LAA SCell in 36.213   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160363 | 0605 | -       | A   | Clarification on T <sub>th</sub> threshold in dual connectivity   | 13.1.0         |
| 2016-03        | RAN#71         | RP-160361 | 0540 | 6       | B   | Introduction of further LTE Physical Layer Enhancements for MTC   | 13.1.0         |
| 2016-03        | Post<br>RAN#71 |           |      |         |     | MCC update to show correct version of the spec in the headers of all subparts and get all of them aligned with coversheet | 13.1.1         |
| 2016-06        | RAN#72         | RP-161062 | 0575 | 2       | F   | Correction on SPS HARQ-ACK bit handling in case of dynamic codebook configuration of eCA in 36.213                        | 13.2.0         |
| 2016-06        | RAN#72         | RP-161063 | 0593 | 1       | F   | Correction to the UE's assumption on DMRS ports   | 13.2.0         |
| 2016-06        | RAN#72         | RP-161062 | 0608 | 1       | F   | Correction on HARQ-ACK ordering in case of semi-static codebook configuration of eCA                                      | 13.2.0         |
| 2016-06        | RAN#72         | RP-161062 | 0610 | 1       | F   | Correction on timing for secondary cell activation/deactivation for eCA in 36.213   | 13.2.0         |
| 2016-06        | RAN#72         | RP-161068 | 0611 | -       | A   | Correction on RRC parameter for configuring new TBSSs   | 13.2.0         |
| 2016-06        | RAN#72         | RP-161063 | 0614 | -       | F   | Correction to rank 5-8 FD-MIMO CSI feedback   | 13.2.0         |
| 2016-06        | RAN#72         | RP-161062 | 0615 | -       | F   | Correction on aperiodic CSI reporting mode 1-0 and 1-1  | 13.2.0         |
| 2016-06        | RAN#72         | RP-161066 | 0616 | -       | F   | Correction of paging PDSCH transmission for MTC UE  | 13.2.0         |
| 2016-06        | RAN#72         | RP-161066 | 0618 | -       | F   | Update RRC parameter names for MTC  | 13.2.0         |
| 2016-06        | RAN#72         | RP-161066 | 0619 | -       | F   | PUCCH repetition for Msg4 for MTC   | 13.2.0         |

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| 2016-06 | RAN#72 | RP-161066 | 0620 | - | F | MPDCCH repetition for paging and random access for MTC   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0621 | 1 | F | MCS field in DCI format 6-2 for paging for MTC   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161062 | 0622 | - | F | Coding of higher layer parameter codebooksizeDetermination-r13   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161062 | 0623 | 1 | F | Corrections on Simultaneous HARQ-ACK and P-CSI in 36.213   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161069 | 0624 | - | F | Corrections SRS dropping in CA in 36.213   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161065 | 0625 | - | D | Correction to the usage of undefined terminology "channel"   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161065 | 0626 | - | F | Correction on channel access procedure after an additional defer duration for DL LBT                     | 13.2.0 |
| 2016-06 | RAN#72 | RP-161284 | 0627 | 1 | F | Clarification for LAA CSI processing   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161065 | 0628 | - | F | MCS Table for Initial Partial TTI in LAA   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161063 | 0629 | - | F | Correction on the linkage between CSI-RS and CSI-IM for Class B  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161062 | 0630 | - | F | Correction for HARQ-ACK Codebook Determination in eCA  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161065 | 0631 | - | F | Clarification on "special subframe" for frame structure type 3 in 36.213                                 | 13.2.0 |
| 2016-06 | RAN#72 | RP-161062 | 0632 | - | F | Corrections on simultaneous transmission of HARQ-ACK and SR in 36.213                                    | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0633 | 2 | F | MDPCCH candidate overflow monitoring correction for eMTC   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0634 | - | F | Correction to TS 36.213 for eMTC   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0635 | 1 | F | Correction on M-PDCCH case definition  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0636 | - | F | Correction on CSS for MPDCCH configured by temporary C-RNTI and Type0 MPDCCH CSS resource                | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0637 | 2 | F | Correction on collision of dynamically scheduled data and semi-statically scheduled data for Rel-13 eMTC | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0638 | 1 | F | Correction on PDSCH transmission timing for Rel-13 eMTC  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0639 | - | F | On the collision between eMTC SIB and MPDCCH/PDSCH in TS 36.213  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0639 | - | F | On the collision between eMTC SIB and MPDCCH/PDSCH in TS 36.213  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0640 | - | F | Collision between PUCCH format 2 and PDSCH with repetitions  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0641 | - | F | Clarification of TM1/2/6 on MBSFN subframes  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0642 | - | F | Correction of fallback behavior for TM9  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0643 | - | F | Correction on RV and MPDCCH starting position  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0644 | 1 | F | Collision between PSS/SSS/PBCH and PDSCH for MTC   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161065 | 0645 | - | F | CR for 36.213 on multi-channel access procedure Type A2 in LAA   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0646 | - | F | CR for TS36.213 related to 2+4 PRB set   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161063 | 0647 | - | F | CR on CSI-RS ID configuration for TM9 in TS 36.213   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161065 | 0649 | - | F | Initial CCA Behaviour in the Channel Access Procedure  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161065 | 0650 | - | F | CR on clarification for channel sensing  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161065 | 0651 | - | F | CR for the contention window adjustment procedure in LAA downlink channel access                         | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0653 | 1 | F | eMTC MPDCCH corrections for 36.213   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161064 | 0654 | - | F | Correction on search space to decode the PDCCH configured by the SC-N-RNTI                               | 13.2.0 |
| 2016-06 | RAN#72 | RP-161067 | 0656 | 1 | B | Introduction of NB-IoT   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0657 | - | F | Starting OFDM symbol for SIB1-BR for BL/CE UE  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0658 | - | F | Collision between SIB1-BR and SI message for BL/CE UE  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0660 | 3 | F | MPDCCH search space for random access in connected mode for BL/CE UE                                     | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0662 | - | F | Definition of number of MPDCCH repetitions for BL/CE UE  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0663 | - | F | PRB locations for Type0 MPDCCH search space for BL/CE UE   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161063 | 0666 | - | F | CR on FD-MIMO codebooks (36.213)   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161063 | 0667 | - | F | CR on CSI-Reporting-Type in TS 36.213  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161070 | 0668 | - | B | Introduction of 60ms periodicity for wideband CQI/PMI reporting  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0669 | - | F | Introduction of 60ms periodicity for wideband CQI/PMI reporting  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0670 | - | F | On MPDCCH AL and search space for 8 EREGs per ECCE in TS 36.213  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0671 | - | F | CR on MPDCCH quasi co-location   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161063 | 0672 | - | F | Correction on UE assumption on DMRS ports  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0673 | - | F | A-CSI Reporting for TM6  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0674 | - | F | Corrections on CSI Reporting   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0675 | - | F | Correction on RV determination for PUSCH in TS 36.213  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0677 | - | F | Clarification on Msg3 PUSCH repetition level in TS 36.213  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0678 | - | F | Correction on SRS frequency location in TS 36.213  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0679 | - | F | Correction on PDSCH reception timing for eMTC  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0680 | 1 | F | Correcting configuration parameter for number of PRB-pairs   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0681 | - | F | Clarification on starting subframe for MPDCCH  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0682 | - | F | MCS for Random Access Response Grant   | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0683 | 2 | F | Correction on UCI multiplexing on PUSCH  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161061 | 0684 | - | F | Correction on RLM for PSCell in dual connectivity  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0685 | - | F | Correction on PDSCH transmission scheme assumed for TM9 CSI reference resource in TS 36.213              | 13.2.0 |
| 2016-06 | RAN#72 | RP-161065 | 0686 | - | F | CR on clarification for channel sensing  | 13.2.0 |

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| 2016-06 | RAN#72 | RP-161065 | 0687 | - | F | CR on CWp adjustment  | 13.2.0 |
| 2016-06 | RAN#72 | RP-161066 | 0688 | - | F | Clarification of CSI measurements   | 13.2.0 |
| 2016-09 | RAN#73 | RP-161563 | 0689 | 1 | F | Correction on random access procedure for NB-IoT on TS 36.213   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161563 | 0690 | - | F | Correction on NPDCCH related procedure on TS 36.213   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161563 | 0691 | - | F | Corrections to RRC parameter names for NB-IoT in TS 36.213  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161563 | 0692 | 1 | F | Corrections on NPDSCH related procedure in TS 36.213  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161560 | 0693 | - | F | Correction on FD-MIMO codebook in 36.213  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161560 | 0694 | - | F | Correction on RRC parameters for SRS enhancement in 36.213  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0695 | - | F | Transport block size determination for Msg2   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161563 | 0696 | - | F | Correction on NPUSCH related procedure on TS 36.213   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0698 | - | F | Correction on the reference of narrowband definition in TS 36.213   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0699 | - | F | Correction on the relationship between IMCS and ITBS for DCI format 6-1A in TS 36.213                                 | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0700 | 1 | F | Correction on the scrambling initialization for SIB1-BR and SI for eMTC in TS 36.213                                  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161563 | 0701 | - | F | Corrections on NPDCCH search space for random access in connected mode in TS 36.213                                   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161558 | 0706 | 1 | A | Correction on storing soft channel bits for different UE categories in Rel-13   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161560 | 0708 | - | F | Correction on the citation of table indexes for mapping of ICRI to MCRI   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161560 | 0710 | - | F | Corrections on Codebooks in 36.213  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0711 | - | F | Default max number of PUSCH repetitions for Msg3 for BL/CE UE   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0714 | 1 | F | PDSCH start subframe in TDD for BL/CE UE  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0715 | - | F | Repetition with aperiodic CSI for BL/CE UE  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161561 | 0718 | - | F | Correction on "special subframe" for frame structure type 3 in 36.213 for Rel-13 LAA                                  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161559 | 0719 | - | F | Clarification on HARQ-ACK transmission  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0720 | 1 | F | Correction for UL grant size in RAR   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0721 | 2 | F | MBSFN subframes and SIB2 decoding   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0722 | 1 | F | Overriding of invalid subframe for msg3 PUSCH when R=1  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0723 | - | F | On the mapping of TPC command field to power correction values in TS 36.213   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0724 | - | F | Correction on the MPDCCH scheduling Paging in special subframe in TS 36.213   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0725 | 1 | F | Clarification of valid subframe in eMTC   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161563 | 0726 | - | F | Quasi-colocation of NB-IoT antenna ports  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0728 | 1 | F | PUCCH resource allocation   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0729 | 1 | F | RV version for PDSCH carrying paging  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161735 | 0730 | 1 | F | Missing definition of higher layer parameter eutra-CRS-SequenceInfo   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161563 | 0731 | - | F | PUSCH timing delay for NB-IoT   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0732 | - | F | RV Cycling for PUSCH and PDSCH  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161563 | 0734 | - | F | Clarification of scheduling delay   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0736 | - | F | Clarification on MPDCCH monitoring on SFN rollover and search space overlap   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0737 | - | F | PUCCH transmission and invalid subframes  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161562 | 0738 | - | F | SRS bit in DCI  | 13.3.0 |
| 2016-09 | RAN#73 | RP-161563 | 0739 | - | F | Clarification of NB-IoT DL subframe configuration   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161560 | 0740 | - | F | Correction on FD-MIMO codebooks   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161561 | 0741 | 1 | F | CR on LAA post transmission backoff   | 13.3.0 |
| 2016-09 | RAN#73 | RP-161797 | 0745 | 1 | F | CR to remove the incorrect implementation of LAA defer and sensing duration introduced by the unapproved CR R1-161166 | 13.3.0 |
| 2016-09 | RAN#73 | RP-161572 | 0709 | 2 | B | Addition of LTE_LATRED_L2-Core  | 14.0.0 |
| 2016-09 | RAN#73 | RP-161571 | 0742 | - | B | Introduction of eLAA (PHY layer aspects) in 36.213  | 14.0.0 |
| 2016-09 | RAN#73 | RP-161803 | 0743 | 1 | B | Introduction of eLAA (UL Channel Access Procedure) in 36.213  | 14.0.0 |
| 2016-09 | RAN#73 | RP-161570 | 0744 | - | B | Introduction of V2V into TS36.213   | 14.0.0 |
| 2016-12 | RAN#74 | RP-162359 | 0747 | - | A | Correction on the determination of NPDCCH candidates  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162362 | 0748 | - | B | Introduction of RACHless handover for Further mobility enhancement in LTE   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162356 | 0757 | - | A | Correction to PUCCH reporting mode 2-1  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162356 | 0758 | - | A | Correction to PUCCH reporting mode 1-1  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0759 | - | F | Correction on UL grant reception in ending partial subframe   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0760 | - | F | Correction on UL burst scheduling   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0761 | - | F | CR on PHICH operation for eLAA in 36.213  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0762 | - | F | Correction on handling UL LBT procedure under UE power limited case   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162358 | 0765 | - | A | Clarification on spectral efficiency  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162358 | 0766 | 2 | A | Aperiodic CSI without MPDCCH frequency hopping  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162358 | 0768 | 1 | A | Correction on equation for MPDCCH search space and starting subframe position   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162358 | 0771 | - | A | Clarification of number of repetitions of PUCCH   | 14.1.0 |

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| 2016-12 | RAN#74 | RP-162359 | 0772 | - | A | Clarification on nrs-Power related description   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0773 | - | F | Removal of LAA DRS channel access from UL Type 2 Channel Access description                            | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0774 | - | D | CR on UL duration and offset field in TS 36.213  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0775 | - | F | Correction on channel access priority class according to UL LBT type indication in eLAA                | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0776 | 1 | F | Correction on periodic CSI transmission  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0778 | - | F | CR on UL CWS adjustment for eLAA in 36.213   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0779 | 1 | F | CR on trigger monitoring timeline for triggered grants in eLAA   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0781 | 2 | F | CR on aperiodic CSI reporting for triggered UL grants in LAA   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0783 | - | F | Correction on CSI measurement in LAA   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0784 | - | F | Correction on PDCCH candidate configuration  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0786 | - | F | Correction on the UL Type 1 channel access description   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162361 | 0787 | - | A | Correction on downlink power allocation for SC-PTM   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162359 | 0790 | - | A | Corrections on the description of carrier for NB-IoT in TS 36.213                                      | 14.1.0 |
| 2016-12 | RAN#74 | RP-162359 | 0792 | 2 | A | Corrections on the Table 16.6-2: Type 1- NPDCCH common search space candidates for NB-IoT in TS 36.213 | 14.1.0 |
| 2016-12 | RAN#74 | RP-162359 | 0797 | - | A | Control information inconsistent handling for NB-IoT in 36.213   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0802 | 1 | F | CR on Multi-carrier LBT for Uplink Transmission  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0803 | - | F | Corrections to EPDCCH candidate derivation procedure for eLAA in TS36.213                              | 14.1.0 |
| 2016-12 | RAN#74 | RP-162357 | 0804 | - | A | Correction on DL CWS adjustment for LAA  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0805 | - | F | Correction on aperiodic CSI only transmission for LAA SCell  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162358 | 0807 | - | A | CR on RV Cycling for PDSCH   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0809 | 1 | F | CR on UE assumption of LBT success for determining periodic CSI reporting                              | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0810 | - | F | Correction on continuous transmission after the successful LBT   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0811 | - | A | CR on MCOT limits for carriers on which eNB performs Type B LBT  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0813 | - | F | CR on the UE assumption on multiple UL grants indicating a same subframe                               | 14.1.0 |
| 2016-12 | RAN#74 | RP-162358 | 0814 | - | A | PDSCH transmission on special subframe for eMTC  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0815 | - | F | CR on using 25us LBT for UEs on carriers without eNB Cat 4 LBT   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0816 | - | F | CR on UL resource allocation for 10MHz LAA SCell   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162358 | 0818 | - | A | DCI for SPS  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162358 | 0820 | - | A | Number of MPDCCH-PRB sets  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0821 | - | F | Correction on EPDCCH candidate configuration   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0822 | - | F | CR on applying TPC commands for UL grants in LAA   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0823 | - | F | CR on PHR reporting for triggered UL grants in LAA   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162368 | 0824 | - | F | Correction on PDCCH candidate adjustments  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162359 | 0826 | - | A | Correction on NPDCCH and NPDSCH start symbol   | 14.1.0 |
| 2016-12 | RAN#74 | RP-162364 | 0827 | - | B | Introduction of SRS switching into 36.213  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162365 | 0828 | - | B | Introduction of Multiuser Superposition Transmission (MUST) in 36.213                                  | 14.1.0 |
| 2016-12 | RAN#74 | RP-162366 | 0829 | - | F | Corrections to 36.213 on V2V   | 14.1.0 |
| 2017-03 | RAN#75 | RP-170605 | 0830 | 1 | B | Introduction of Uplink Capacity Enhancements for LTE to 36.213 sections 00-05                          | 14.2.0 |
| 2017-03 | RAN#75 | RP-170605 | 0831 | 1 | B | Introduction of Uplink Capacity Enhancements for LTE to 36.213 sections 06-09                          | 14.2.0 |
| 2017-03 | RAN#75 | RP-170608 | 0832 | 1 | B | Introduction of eMBMS enhancements for LTE to 36.213 sections 06-09                                    | 14.2.0 |
| 2017-03 | RAN#75 | RP-170608 | 0833 | 1 | B | Introduction of eMBMS enhancements for LTE to 36.213 sections 10-13                                    | 14.2.0 |
| 2017-03 | RAN#75 | RP-170610 | 0835 | - | A | Correction on NPDCCH start subframe  | 14.2.0 |
| 2017-03 | RAN#75 | RP-170610 | 0837 | - | A | Correction on NRS power in-band with non-integer nrs-CRS-PowerOffset                                   | 14.2.0 |
| 2017-03 | RAN#75 | RP-170606 | 0839 | - | A | Correction on NRS power in-band with non-integer nrs-CRS-PowerOffset                                   | 14.2.0 |
| 2017-03 | RAN#75 | RP-170609 | 0841 | - | A | PDSCH dropping rules in special subframes in eMTC  | 14.2.0 |
| 2017-03 | RAN#75 | RP-170609 | 0843 | - | A | I 0 definition for RV cycling  | 14.2.0 |
| 2017-03 | RAN#75 | RP-170609 | 0845 | - | A | PUCCH resource determination for M greater than 1 in eMTC  | 14.2.0 |
| 2017-03 | RAN#75 | RP-170609 | 0847 | - | A | Correction on aperiodic CQI reporting for BL/CE UEs in 1.4MHz system bandwidth                         | 14.2.0 |
| 2017-03 | RAN#75 | RP-170609 | 0849 | - | A | Clarification on Msg 3/4 MPDCCH narrowband index   | 14.2.0 |
| 2017-03 | RAN#75 | RP-170618 | 0850 | - | F | CR on two-stage scheduling for eLAA in 36.213  | 14.2.0 |
| 2017-03 | RAN#75 | RP-170618 | 0851 | - | F | CR on DCI blind decodes for eLAA in 36.213   | 14.2.0 |
| 2017-03 | RAN#75 | RP-170616 | 0852 | - | F | Correction on downlink power allocation for UE with QPSK modulation for MUST in TS 36.213              | 14.2.0 |
| 2017-03 | RAN#75 | RP-170618 | 0853 | - | F | Correction on PHR for LAA  | 14.2.0 |
| 2017-03 | RAN#75 | RP-170610 | 0855 | - | A | Correction on the description of UE procedure for receiving ACK/NACK                                   | 14.2.0 |
| 2017-03 | RAN#75 | RP-170609 | 0857 | - | A | PUCCH collision in eMTC  | 14.2.0 |
| 2017-03 | RAN#75 | RP-170618 | 0858 | - | F | Clarification on channel access procedure for SRS transmission   | 14.2.0 |

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| 2017-03 | RAN#75 | RP-170610 | 0860 | - | A | NPDCCH starting subframe determination in NB-IoT   | 14.2.0 |
| 2017-03 | RAN#75 | RP-170615 | 0861 | 1 | F | CR for SRS switching in 36.213   | 14.2.0 |
| 2017-03 | RAN#75 | RP-170622 | 0863 | - | B | Introduction of V2X  | 14.2.0 |
| 2017-03 | RAN#75 | RP-170623 | 0864 | - | B | Introduction of Further Enhanced MTC into 36.213   | 14.2.0 |
| 2017-03 | RAN#75 | RP-170624 | 0865 | - | B | Introduction of NB-IoT enhancements for LTE  | 14.2.0 |
| 2017-03 | RAN#75 | RP-170625 | 0866 | - | B | Introduction of Voice and Video enhancement for LTE to 36.213  | 14.2.0 |
| 2017-03 | RAN#75 | RP-170607 | 0867 | - | B | Introduction of eFD-MIMO into 36.213   | 14.2.0 |
| 2017-06 | RAN#76 | RP-171196 | 0869 | - | A | Correction on Msg3 PUSCH Repetition for CE mode B  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171195 | 0872 | - | F | Correction on UE procedure for receiving PDSCH on FeMBMS/Unicast-mixed carrier in 36.213               | 14.3.0 |
| 2017-06 | RAN#76 | RP-171205 | 0873 | - | F | Correction on TBS values   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171196 | 0875 | - | A | Candidate determination for MPDCCH starting in unsupported special subframe for eMTC                   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171196 | 0877 | - | A | PUCCH resource determination in TDD for eMTC   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171196 | 0879 | - | A | Corrections on UL resource allocation type 0 in TS 36.213  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171197 | 0881 | - | A | Timing relationship for RAR monitoring in NB-IoT   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171201 | 0882 | - | F | CR on two stage grant DCI field definition   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171201 | 0883 | - | F | Correction to SRS Triggering for LAA SCells  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171201 | 0884 | - | F | Correction for MCOT value on channel access priority class for UL                                      | 14.3.0 |
| 2017-06 | RAN#76 | RP-171203 | 0885 | - | F | Correction on tables used for SCI format 1 in 36.213   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171203 | 0886 | - | F | Alignment with 36.212  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171204 | 0887 | - | F | Mapping of wideband combination index to allocated widebands in FeMTC                                  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171204 | 0888 | - | F | Clarification of TBS table for PDSCH with maximum 5 MHz channel bandwidth                              | 14.3.0 |
| 2017-06 | RAN#76 | RP-171204 | 0889 | - | F | UL Type 4 resource allocation  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171194 | 0890 | - | F | Corrections on PUCCH reporting type payload size in 36.213   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171194 | 0891 | - | F | Correction on CSI relaxation for aperiodic CSI-RS  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171210 | 0892 | - | B | Introduction of new maximum TBS for DL 256QAM  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171192 | 0893 | 1 | F | Removal of Table 8.6.1-4 in 36.213   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171206 | 0894 | - | F | Modulation overriding in video-voice enhancements  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171194 | 0895 | - | F | CR on CSI-RS resource activation   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171203 | 0898 | 1 | F | Corrections on UE partial sensing behaviour in TS 36.213   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171194 | 0899 | - | F | Corrections to 36.213 for Rel-14 eFD-MIMO  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171194 | 0900 | - | F | Corrections to 36.213 for Rel-14 eFD-MIMO CSI collision handling                                       | 14.3.0 |
| 2017-06 | RAN#76 | RP-171194 | 0901 | - | F | Corrections on QCL indication in 36.213  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171194 | 0902 | - | F | Corrections on CRI reporting for multi-shot CSI-RS in 36.213   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171210 | 0903 | - | F | CR on Higher-Layer Parameters for 36.213   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171204 | 0904 | - | F | Clarification of resource allocation for PDSCH in CE mode A  | 14.3.0 |
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| 2017-06 | RAN#76 | RP-171196 | 0906 | - | A | PUCCH format 2 collision with PDSCH with repetitions   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171203 | 0907 | - | F | CR on subframe indexing in resource reselection  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171193 | 0909 | - | A | Determination of PUCCH format selection depending on number of HARQ-ACK, CSI and SR bits               | 14.3.0 |
| 2017-06 | RAN#76 | RP-171199 | 0910 | 2 | F | Miscellaneous corrections to 36.213  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171197 | 0913 | - | A | Correction on 3.75 kHz NPUSCH format 2 transmission  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171203 | 0916 | - | F | CR for skipped subframe handling for shorter periodicity in PC5-based V2V                              | 14.3.0 |
| 2017-06 | RAN#76 | RP-171196 | 0918 | - | A | Clarification of the #repetitions used for msg3 retransmissions  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171196 | 0919 | - | A | CR on MPDCCH PRB Sets – Rel-14   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171196 | 0921 | 1 | A | Correction of RAR window definition in CE mode B   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171203 | 0925 | - | F | Correction of UE behavior to meet Crlimit  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171204 | 0926 | - | F | Correction on HARQ-ACK bundling and dynamic HARQ-ACK timing in 36.213                                  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171200 | 0927 | - | F | Corrections on Power Control for SRS Switching   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171210 | 0929 | - | F | Corrections on the numbering of the tables in 8.0  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171192 | 0930 | 1 | F | Corrections on PRB scaling for PUSCH in UpPTS  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171194 | 0931 | - | F | CR on CSR for CSI feedback for semi-OL transmission  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171196 | 0933 | - | A | Clarification of RV Cycling in the presence of invalid SFs   | 14.3.0 |
| 2017-06 | RAN#76 | RP-171196 | 0935 | - | A | Correction of the calculation of the #RV-blocks for a given PDSCH                                      | 14.3.0 |
| 2017-06 | RAN#76 | RP-171196 | 0937 | - | A | Clarification for the overlap of UL TA update and retuning gaps for BL/CE UEs                          | 14.3.0 |
| 2017-06 | RAN#76 | RP-171196 | 0939 | - | A | Correction on starting OFDM symbol for MPDCCH and PDSCH in special subframe                            | 14.3.0 |
| 2017-06 | RAN#76 | RP-171203 | 0941 | - | F | Correction on abbreviation of Uplink SPS RNTI and Sidelink SPS RNTI in 36.213                          | 14.3.0 |
| 2017-06 | RAN#76 | RP-171205 | 0942 | - | F | Timing relationships for 2 HARQ processes  | 14.3.0 |
| 2017-06 | RAN#76 | RP-171203 | 0940 | - | F | CR on skipped subframe handling for partial sensing  | 14.3.0 |
| 2017-09 | RAN#77 | RP-171646 | 0945 | 1 | F | Clarification of Type1A-CSS candidates   | 14.4.0 |
| 2017-09 | RAN#77 | RP-171642 | 0950 | 1 | F | Correction for UCI transmission on LAA sCell   | 14.4.0 |
| 2017-09 | RAN#77 | RP-171639 | 0953 | - | A | Correction on MPDCCH search space with CRC scrambled by the C-RNTI outside the random access procedure | 14.4.0 |

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| 2017-09 | RAN#77 | RP-171644 | 0955 | - | F | Corrections to Mode-3 scheduling  | 14.4.0 |
| 2017-09 | RAN#77 | RP-171638 | 0956 | - | F | CSI periodicity relationship between eMIMO-Types in hybrid CSI                            | 14.4.0 |
| 2017-09 | RAN#77 | RP-171637 | 0958 | - | A | Correction on PUCCH format 3 information for eCA  | 14.4.0 |
| 2017-09 | RAN#77 | RP-171642 | 0959 | - | F | Correction on periodic CSI reporting for LAA SCell  | 14.4.0 |
| 2017-09 | RAN#77 | RP-171649 | 0961 | - | A | Corrections on Class A Codebook in 36.213   | 14.4.0 |
| 2017-09 | RAN#77 | RP-171644 | 0962 | - | F | CR on definition of sensing window  | 14.4.0 |
| 2017-09 | RAN#77 | RP-171644 | 0963 | 1 | F | CR on subframe index for PSCCH re-transmission in mode 3                                  | 14.4.0 |
| 2017-09 | RAN#77 | RP-171636 | 0964 | - | F | Correct RRC parameter for UL 256QAM   | 14.4.0 |
| 2017-09 | RAN#77 | RP-171637 | 0966 | - | A | Maximum Code Rate applicability for UCI reporting over PUSCH                              | 14.4.0 |
| 2017-09 | RAN#77 | RP-171649 | 0968 | - | A | PUCCH priority for CSI report types 7-8-9-10  | 14.4.0 |
| 2017-09 | RAN#77 | RP-171645 | 0969 | - | F | Correction on TBS determination for PDSCH in CE mode B                                    | 14.4.0 |
| 2017-09 | RAN#77 | RP-171650 | 0973 | - | A | SRS dropping for simultaneous SRS and PUSCH in intraband CA                               | 14.4.0 |
| 2017-09 | RAN#77 | RP-171637 | 0975 | - | A | PUCCH Format 4-5 collision with SRS   | 14.4.0 |
| 2017-09 | RAN#77 | RP-171646 | 0976 | - | F | Search space monitoring   | 14.4.0 |
| 2017-09 | RAN#77 | RP-171646 | 0977 | - | F | Clarification on NPDCCH monitoring for Rel-14 2-HARQ process UE                           | 14.4.0 |
| 2017-09 | RAN#77 | RP-171646 | 0978 | - | F | Correction of RAR window timing definition in NB-IoT                                      | 14.4.0 |
| 2017-12 | RAN#78 | RP-172677 | 0979 | 1 | F | PUSCH and SRS Transmission in UpPTS   | 14.5.0 |
| 2017-12 | RAN#78 | RP-172682 | 0981 | - | F | CR on CSI report reference subframe for an LAA SCell                                      | 14.5.0 |
| 2017-12 | RAN#78 | RP-172679 | 0983 | - | D | Renaming of duplicated table 7.2.1-1A   | 14.5.0 |
| 2017-12 | RAN#78 | RP-172681 | 0985 | 1 | A | Corrections of parameter names for NB-IoT   | 14.5.0 |
| 2017-12 | RAN#78 | RP-172686 | 0986 | 1 | F | Clarification on timing relationships of 2 HARQ process                                   | 14.5.0 |
| 2017-12 | RAN#78 | RP-172680 | 0987 | - | A | TBS for TDD special subframe for BL/CE UE without repetition                              | 14.5.0 |
| 2017-12 | RAN#78 | RP-172680 | 0989 | - | A | Non-repeated PUCCH SR transmissions on invalid UL subframes                               | 14.5.0 |
| 2017-12 | RAN#78 | RP-172679 | 0990 | - | F | Clarification on supporting lower frequency domain density for Class A NZP CSI-RS         | 14.5.0 |
| 2017-12 | RAN#78 | RP-172685 | 0991 | - | F | Corrections on HARQ-ACK bundling  | 14.5.0 |
| 2017-12 | RAN#78 | RP-172681 | 0997 | - | A | Typo correction for table 16.5.1.2.1-1  | 14.5.0 |
| 2017-12 | RAN#78 | RP-172678 | 0999 | - | A | Usage of PUCCH format 3 for with more than 5 CC   | 14.5.0 |
| 2017-12 | RAN#78 | RP-172684 | 1000 | - | F | Correction on sidelink index field name in DCI format 5A for V2V in 36.213                | 14.5.0 |
| 2017-12 | RAN#78 | RP-172685 | 1001 | - | F | Correction for modulation determination under larger TBS for random access response grant | 14.5.0 |
| 2017-12 | RAN#78 | RP-172692 | 1002 | - | F | Correction on higher layer parameter for eVoLTE   | 14.5.0 |
| 2017-12 | RAN#78 | RP-172691 | 1003 | - | F | Correction for dropping rules in intra-band SRS carrier switching                         | 14.5.0 |
| 2017-12 | RAN#78 | RP-172677 | 1004 | - | F | Change request for UE behaviour under special subframe configuration 10                   | 14.5.0 |
| 2017-12 | RAN#78 | RP-172679 | 1005 | - | F | Correction on the scale factor for semi-OL rank-1   | 14.5.0 |
| 2017-12 | RAN#78 | RP-172686 | 1008 | - | F | Correction of NRS-CRS power offset configuration for NB-IoT                               | 14.5.0 |
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| 2017-12 | RAN#78 | RP-172686 | 1010 | - | F | Clarification on 2 HARQ process applicability to UE-specific search space                 | 14.5.0 |
| 2017-12 | RAN#78 | RP-172686 | 1011 | - | F | Correction of interference in NB-IoT RACH procedure                                       | 14.5.0 |
| 2017-12 | RAN#78 | RP-172693 | 0992 | 1 | B | Introduction of shortened processing time and shortened TTI into 36.213, s00-s05          | 15.0.0 |
| 2017-12 | RAN#78 | RP-172693 | 0993 | 1 | B | Introduction of shortened processing time and shortened TTI into 36.213, s06-s09          | 15.0.0 |
| 2017-12 | RAN#78 | RP-172693 | 0994 | 1 | B | Introduction of shortened processing time and shortened TTI into 36.213, s10-s13          | 15.0.0 |
| 2018-03 | RAN#79 | RP-180195 | 0995 | 2 | B | Introduction of feCoMP into 36.213  | 15.1.0 |
| 2018-03 | RAN#79 | RP-180201 | 1013 | 2 | B | Introducing support for EN-DC Coexistence into TS36.213 s00-s05                           | 15.1.0 |
| 2018-03 | RAN#79 | RP-180201 | 1014 | 2 | B | Introducing support for EN-DC Coexistence into TS36.213 s06-s09                           | 15.1.0 |
| 2018-03 | RAN#79 | RP-180201 | 1015 | 3 | B | Introducing support for EN-DC Coexistence into TS36.213 s10-s13                           | 15.1.0 |
| 2018-03 | RAN#79 | RP-180194 | 1030 | - | A | Correction on CSI reporting for Class B K>1   | 15.1.0 |
| 2018-03 | RAN#79 | RP-180191 | 1032 | - | A | Clarification on UL power control for NB-IoT  | 15.1.0 |
| 2018-03 | RAN#79 | RP-180188 | 1035 | - | A | Multiple CSI reports for eCA  | 15.1.0 |
| 2018-03 | RAN#79 | RP-180194 | 1036 | - | A | Correction on CSI reporting for Class B K=1   | 15.1.0 |
| 2018-03 | RAN#79 | RP-180190 | 1037 | - | A | Correction to determination of number of PUCCH repetitions for BL/CE UE                   | 15.1.0 |
| 2018-03 | RAN#79 | RP-180192 | 1038 | - | A | Correction on PUCCH resource determination in HARQ-ACK bundling                           | 15.1.0 |
| 2018-03 | RAN#79 | RP-180192 | 1039 | - | A | Correction on higher layer parameter <i>schedulingInfoSIB1-BR-r13</i>                     | 15.1.0 |
| 2018-03 | RAN#79 | RP-180187 | 1040 | - | A | Correction on DwPTS usage in special subframe configuration 10                            | 15.1.0 |
| 2018-03 | RAN#79 | RP-180196 | 1041 | - | A | UCI multiplexing for eVoLTE   | 15.1.0 |
| 2018-03 | RAN#79 | RP-180198 | 1042 | - | A | Corrections for antenna switching   | 15.1.0 |
| 2018-03 | RAN#79 | RP-180193 | 1043 | - | A | Correction on Msg3 power control  | 15.1.0 |
| 2018-03 | RAN#79 | RP-180190 | 1048 | - | A | SPS for eMTC  | 15.1.0 |
| 2018-06 | RAN#80 | RP-181171 | 1045 | 1 | A | Support of early contention resolution  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181170 | 1049 | 2 | F | Corrections for shortened processing time and shortened TTI in 36.213, s00-s05            | 15.2.0 |
| 2018-06 | RAN#80 | RP-181170 | 1050 | 2 | F | Corrections for shortened processing time and shortened TTI in 36.213, s06-s07            | 15.2.0 |

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| 2018-06 | RAN#80 | RP-181170 | 1052 | 1 | F | Corrections for shortened processing time and shortened TTI in 36.213, s14-xx  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181173 | 1053 | 1 | B | Introduction of enhancements for high capacity stationary wireless link and introduction of 1024 QAM for LTE to 36.213 | 15.2.0 |
| 2018-06 | RAN#80 | RP-181180 | 1054 | 1 | B | Introduction of Enhancements to LTE operation in unlicensed spectrum into 36.213 s00-s05                               | 15.2.0 |
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| 2018-06 | RAN#80 | RP-181162 | 1060 | - | A | Correction on number of subframes for semistatic codebook determination and transmission over PUSCH                    | 15.2.0 |
| 2018-06 | RAN#80 | RP-181165 | 1063 | - | A | Correction on TBS determination for msg 3 retransmission and CSS for fallback  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181181 | 1065 | - | A | Clarification of Msg3 power control in NB-IoT  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181161 | 1067 | - | A | On the configuration of UL 256QAM  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181179 | 1069 | - | A | Correction on look-ahead for SRS carrier switching   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181175 | 1070 | - | B | Introduction of Enhancing CA Utilization into 36.213   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181181 | 1072 | - | A | Clarification of NPUSCH uplink compensation gaps for 2 HARQ processes  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181182 | 1073 | - | B | Introduction of reduced control plane latency  | 15.2.0 |
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| 2018-06 | RAN#80 | RP-181162 | 1081 | - | A | Clarification on beta offset for more than 22 HARQ-ACK bits  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181162 | 1084 | - | A | Clarification on simultaneousAckNackAndCQI for format 4-5 and format 3   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181162 | 1087 | - | A | Clarification on PUCCH formats   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181164 | 1090 | - | A | Correction on PUCCH configuration with CEModeA or CEModeB  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181178 | 1092 | - | A | Correction to timing advance   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181169 | 1094 | - | A | Correction on RV determination for eVoLTE  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181165 | 1096 | - | A | Corrections in Physical Resource Block numbering to RA Type0 for FeMTC UEs   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181182 | 1097 | - | B | Introduction of advanced CSI CBR in TS 36.213  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181181 | 1099 | - | A | Clarification of NPUSCH reception in 2 NB-IoT HARQ processes   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181175 | 1100 | - | B | Short CQI Reporting for EuCA   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181174 | 1101 | 1 | B | Introduction of even further enhanced MTC for LTE in 36.213, s00-s05   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181174 | 1102 | 1 | B | Introduction of even further enhanced MTC for LTE in 36.213, s06-s07   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181174 | 1103 | 1 | B | Introduction of even further enhanced MTC for LTE in 36.213, s08-s09   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181166 | 1104 | 1 | B | Introduction of Rel-15 Further NB-IoT enhancements in 36.213, s14  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181182 | 1105 | - | B | Introduction of modulation enhancements  | 15.2.0 |
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| 2018-06 | RAN#80 | RP-181177 | 1109 | - | B | Introduction of HRLLC for LTE in 36.213, s07-3   | 15.2.0 |
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| 2018-06 | RAN#80 | RP-181177 | 1111 | - | B | Introduction of HRLLC in 36.213, s09   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181177 | 1112 | - | B | Introduction of HRLLC in 36.213, s10   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181277 | 1113 | - | B | Introduction of Aerial for LTE in 36.213, s00-s05  | 15.2.0 |
| 2018-06 | RAN#80 | RP-181172 | 1114 | - | F | Correction for EN-DC Coexistence into TS36.213 s06-s07   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181172 | 1115 | - | F | Correction for EN-DC Coexistence into TS36.213 s08-s09   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181172 | 1116 | - | F | Correction for EN-DC Coexistence into TS36.213 s00-s05   | 15.2.0 |
| 2018-06 | RAN#80 | RP-181172 | 1117 | - | F | Correction for EN-DC Coexistence into TS36.213 s00-s05   | 15.2.0 |
| 2018-09 | RAN#81 | RP-181785 | 1118 | - | F | Correction on CRI definition in 36.213   | 15.3.0 |
| 2018-09 | RAN#81 | RP-181781 | 1123 | - | A | PRG for eMTC   | 15.3.0 |
| 2018-09 | RAN#81 | RP-181779 | 1126 | - | A | Correction on TDD HARQ-ACK reporting procedure for different UL/DL configurations                                      | 15.3.0 |
| 2018-09 | RAN#81 | RP-181779 | 1128 | - | A | Correction on PUCCH format 4 HARQ-ACK procedure without adaptive codebook  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181784 | 1131 | - | A | Correction to PDSCH RE mapping in TM10   | 15.3.0 |
| 2018-09 | RAN#81 | RP-181780 | 1133 | - | A | Correction on advanced CSI codebook  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181794 | 1137 | - | A | Corrections related to capabilities for SRS Carrier Switching  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181788 | 1139 | - | A | Capability for FeMBMS  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181778 | 1141 | - | A | SRS transmission in UpPTS for special subframe configuration 10  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181778 | 1143 | - | A | HARQ-ACK payload size determination for crs-less special subframe configuration 10                                     | 15.3.0 |

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| 2018-09 | RAN#81 | RP-181785 | 1144 | - | F | Correction on aperiodic CSI triggering for feCoMP in 36.213                    | 15.3.0 |
| 2018-09 | RAN#81 | RP-181797 | 1145 | 1 | F | Corrections related to modulation enhancements                                 | 15.3.0 |
| 2018-09 | RAN#81 | RP-181790 | 1146 | - | F | Applicability of 1024QAM to SPS C-RNTI   | 15.3.0 |
| 2018-09 | RAN#81 | RP-181790 | 1147 | - | F | Removal of R_CSI from 1024QAM CQI table  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181786 | 1149 | - | A | Clarification for antenna selection  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181800 | 1153 | - | A | Change request on UE transmit antenna selection                                | 15.3.0 |
| 2018-09 | RAN#81 | RP-181797 | 1154 | - | B | Change request on 1T2R antenna switching of SRS                                | 15.3.0 |
| 2018-09 | RAN#81 | RP-181795 | 1155 | - | F | Correction to AUL-UCI resource allocation in 36.213                            | 15.3.0 |
| 2018-09 | RAN#81 | RP-181782 | 1157 | - | A | Correction for HARQ-ACK delay in eMTC  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181787 | 1158 | - | F | Corrections for shortened processing time and shortened TTI in 36.213, s00-s05 | 15.3.0 |
| 2018-09 | RAN#81 | RP-181787 | 1159 | - | F | Corrections for shortened processing time and shortened TTI in 36.213, s06-s07 | 15.3.0 |
| 2018-09 | RAN#81 | RP-181787 | 1160 | - | F | Corrections for shortened processing time and shortened TTI in 36.213, s08-s09 | 15.3.0 |
| 2018-09 | RAN#81 | RP-181787 | 1161 | - | F | Corrections for shortened processing time and shortened TTI in 36.213, s10-s13 | 15.3.0 |
| 2018-09 | RAN#81 | RP-181792 | 1162 | - | F | Correction to V2X Phase 2 based on LTE in 36.213, s14                          | 15.3.0 |
| 2018-09 | RAN#81 | RP-181791 | 1163 | - | D | Corrections to even further enhanced MTC for LTE in 36.213, s00-s05            | 15.3.0 |
| 2018-09 | RAN#81 | RP-181791 | 1164 | - | F | Corrections to even further enhanced MTC for LTE in 36.213, s06-s07            | 15.3.0 |
| 2018-09 | RAN#81 | RP-181791 | 1165 | - | F | Corrections to even further enhanced MTC for LTE in 36.213, s08-s09            | 15.3.0 |
| 2018-09 | RAN#81 | RP-181783 | 1166 | - | D | Editorial corrections to Rel-15 Further NB-IoT enhancements in 36.213, s2      | 15.3.0 |
| 2018-09 | RAN#81 | RP-181783 | 1167 | - | F | Corrections to Rel-15 Further NB-IoT enhancements in 36.213, s14               | 15.3.0 |
| 2018-09 | RAN#81 | RP-181793 | 1168 | - | F | Corrections to HRLLC in 36.213, s00-s05  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181793 | 1169 | - | F | Corrections to HRLLC in 36.213, s06-s07  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181793 | 1170 | - | F | Corrections to HRLLC in 36.213, s08-s09  | 15.3.0 |
| 2018-09 | RAN#81 | RP-181791 | 1171 | - | F | Corrections to even further enhanced MTC for LTE in 36.213, s14-xx             | 15.3.0 |