**3GPP TSG RAN meeting #87e RP-200511**

**Electronic Meeting, March 16 – 19, 2020**

## Status Report to TSG

**Agenda item:** 10.3.1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **WI / SI Name** | Rel-16 LTE inter-band Carrier Aggregation for x bands DL (x=3,4,5) with  2 bands UL | | | | |
| included in this status report | Study Item:  No | Core part:  Yes | Performance part:  Yes | | Testing part:  No |
| **Acronym** | LTE\_CA\_R16\_xBDL\_2BUL-Core | | | | |
| **Unique ID** | 800165 | | | | |
| **TSG Tdoc of latest approved WI/SI description (if any)** | RP-192586 | | | | |
| **Target Completion Date**  **(indicate if changed)** | Study Item:  mm/yyyy | Core part: 06/2020  (changed from 03/2020) | Performance part: 06/2020  (changed from 03/2020) | Testing part: mm/yyyy | |
| **Overall Completion level** | Study Item:  xx % | Core part:  90 % | Performance Part: 90 % | Testing part: xx% | |

Note: Overall completion level percentage numbers should use one of the colors below:

* xx%: Normal progress, no RAN plenary action needed
* xx%: Progress behind schedule, may need RAN plenary intervention. If so, SR should clearly define requested action
* xx%: Progress critically behind, RAN plenary shall intervene. SR should define requested action

**Source:**

|  |  |  |
| --- | --- | --- |
| **Leading WG** | | R4 |
| **Rapporteur** | **Name** | Suhwan Lim |
| **Company** | LG Electronics |
| **Email** | Suhwan.lim@lge.com |

## 1 Work plan related evaluation

|  |  |
| --- | --- |
| **Do you want to modify the time budget for this WI/SI compared to what was endorsed at the last RAN meeting?** | No |

*If you answered No: Then please remove the Excel file from the zip file of this status report.*

*If you answered Yes: Then please fill out the attached Excel template to request a modification of the time budgets for your WI /SI. The Excel table has to be filled out for all affected RAN WGs and up to the target date of the WI/SI. The basis are the endorsed time budgets of the last RAN meeting. Please highlight all changes of the values.  
 One time unit (TU) corresponds to ~ 2 hours in the meeting.  
 If this status report covers a WI with Core and Performance part, then please have one line for each in the attached Excel table.  
 Note: If no Excel table is attached, then this means no time budget change.*

**Additional explanations/motivations for the time budget changes in the attached Excel table:**

## 2. Detailed progress in RAN WGs since last TSG meeting (for all involved WGs)

NOTE: Agreements and Open issues impacted cross-TSG aspects shall be explicitly highlighted

## 2.1 RAN1

#### 2.1.1 Agreements

#### 2.1.2 Remaining Open issues

## 2.2 RAN2

#### 2.2.1 Agreements

#### 2.2.2 Remaining Open issues

## 2.3 RAN3

#### 2.3.1 Agreements

#### 2.3.2 Remaining Open issues

## 2.4 RAN4

#### 2.4.1 Agreements

In RAN4 #94-e Electronic Meeting, Revised WID and TR 36.716-03-02 v0.9.0 on LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL were approved and completed band combinations are listed in Table 2.4.1-1 and 2.4.1-2 below.

Table 2.4.1-1 Completed 3 bands DL/2 bands UL in RAN4 #94-e Electronic Meeting

|  |  |
| --- | --- |
| 3 bands DL | 2 bands UL |
| 2A-48A-66A-66A  2A-48D-66A  2A-48C-66A-66A  2A-48D-66A-66A  2A-48E-66A  2A-48E-66A-66A | 48A-66A  2A-48A  2A-66A |
| 2A-48A-66A | 2A-66A |
| 2A-13A-66A  2A-13A-66A-66A | 2A-66A |
| 2A-13A-48A | 2A-48A  13A-48A |
| 13A-48A-66A-66A  13A-48C-66A | 48A-66A  13A-66A  13A-48A |
| 2A-13A-48C | 2A-48A  13A-48A  2A-13A |
| 13A-48D-66A | 48A-66A  13A-48A |
| 13A-48C-66A-66A | 48A-66A  13A-66A  13A-48A |
| 2A-13A-48D | 13A-48A  2A-48A |
| 13A-48D-66A-66A | 48A-66A  13A-66A  13A-48A |
| 5A-48A-66A  5A-48C-66A  5A-48A-66A-66A | 48A-66A  5A-66A  5A-48A |
| 5A-48D-66A | 48A-66A  5A-48A |
| 5A-48C-66A-66A  5A-48D-66A-66A | 48A-66A  5A-66A  5A-48A |
| 2A-5A-66A | 2A-66A |
| 2A-5A-48A | 2A-48A  5A-48A |
| 2A-5A-48C  2A-5A-48D | 2A-48A  5A-48A  2A-5A |
| 2A-5A-66A-66A | 2A-66A  5A-66A |

Table 2.4.1-2 Completed 4 bands DL/2 bands UL in RAN4 #94-e Electronic Meeting

|  |  |
| --- | --- |
| 4 bands DL | 2 bands UL |
| 2A-13A-48A-66A  2A-13A-48C-66A  2A-13A-48A-66A-66A  2A-13A-48C-66A-66A  2A-13A-48D-66A  2A-13A-48D-66A-66A | 2A-66A  2A-48A  48A-66A  13A-66A  13A-48A |
| 2A-5A-48A-66A  2A-5A-48C-66A  2A-5A-48A-66A-66A  2A-5A-48D-66A  2A-5A-48D-66A-66A | 2A-66A  2A-48A  48A-66A  5A-66A  5A-48A  2A-5A |
| 2A-5A-48C-66A-66A | 2A-66A  2A-48A  48A-66A  5A-66A  5A-48A |

#### 2.4.2 Remaining Open issues

Table 2.4.2-1 Progress of Core part WI (3BDL/2BUL CA)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CA combination | REL-indep.  from | contact  name, company | CRs provided to RAN  spec: RAN4 Tdoc  (list all specs and the TR input) | Core part  completed?  yes/no | Perf. part  completed?  yes/no | open issues/comments |
| **Rel16 LTE inter-band CA for 3 bands DL with 2 band UL CA** | | | | | | |
| CA\_3BDL\_3A-11A-18A\_2BUL\_CA\_3A-11A\_BCS0 | REL-11 | Xiao Shao, KDDI | TR 36.716-03-02: R4-1813773  TS36.101: R4-1812220 | Yes | Yes | None |
| CA\_3BDL\_3A-11A-26A\_2BUL\_CA\_3A-11A\_BCS0 | REL-11 | Xiao Shao, KDDI | TR 36.716-03-02: R4-1813774  TS 36.101:  R4-1812220 | Yes | Yes | None |
| CA\_3BDL\_1A-3A-42C\_2BUL\_CA\_1A-42C\_BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1809722,  R4-1900570  TS 36.101:  R4-1810166 | Yes | Yes | None |
| CA\_3BDL\_1A-3A-42C\_2BUL\_CA\_3A-42C\_BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1809722, R4-1900570  TS 36.101:  R4-1810166 | Yes | Yes | None |
| CA\_3BDL\_2A-4A-13A\_2BUL\_CA\_2A-13A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-4A-13A\_2BUL\_CA\_4A-13A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-2A-4A-5A\_2BUL\_CA\_2A-5A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-2A-4A-5A\_2BUL\_CA\_4A-5A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-2A-5A-66A-66A\_2BUL\_CA\_2A-5A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-5B-66A-66A \_2BUL\_CA\_2A-5A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-5B-66A-66A \_2BUL\_CA\_5A-66A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-5A-46D\_2BUL\_CA\_2A-5A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_5A-46D-66A\_2BUL\_CA\_5A\_46A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_5A-46D-66A\_2BUL\_CA\_5A\_66A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-13A-66A-66B\_2BUL\_CA\_2A-13A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-13A-66A-66B\_2BUL\_CA\_13A-66A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_13A-46D-66A\_2BUL\_CA\_13A-66A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-13A-46D\_2BUL\_CA\_2A-13A\_BCS0 | REL-12 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814930  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-13A-48A-48C\_2BUL\_CA\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1900199  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_1A-3A-38A\_2BUL\_CA\_1A-3A\_BCS0 | REL-12 | Zhangpeng, Huawei | TR 36.716-03-02  R4-1900777  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_3BDL\_2A-12A-66A\_2BUL\_CA\_2A-12A\_BCS0 | REL-11 | Nelson Ueng,  T-Mobile USA | TR 36.716-03-02  R4-1902122  TS 36.101:  R4-1905010 | Yes | Yes | None |
| CA\_3BDL\_2A-12A-66A\_2BUL\_CA\_2A-66A\_BCS0 | REL-11 | Nelson Ueng,  T-Mobile USA | TR 36.716-03-02  R4-1902122  TS 36.101:  R4-1905010 | Yes | Yes | None |
| CA\_3BDL\_2A-12A-66A\_2BUL\_CA\_12A-66A\_BCS0 | REL-11 | Nelson Ueng,  T-Mobile USA | TR 36.716-03-02  R4-1902122  TS 36.101:  R4-1905010 | Yes | Yes | None |
| CA\_3BDL\_1A-3A-42D\_2BUL\_CA\_1A-3A\_BCS0 | REL-12 | Yuta Oguma,  NTT DOCOMO | TR 36.716-03-02  R4-1902122  TS 36.101:  R4-1905010 | Yes | Yes | None |
| CA\_3BDL\_1A-3A-42D\_2UL\_ 1A-42A\_BCS0 | REL-12 | Yuta Oguma,  NTT DOCOMO | TR 36.716-03-02  R4-1900570,  R4-1906228  TS 36.101:  R4-1905010 | Yes | Yes | None |
| CA\_3BDL\_1A-3A-42D\_2UL\_ 3A-42A\_BCS0 | REL-12 | Yuta Oguma,  NTT DOCOMO | TR 36.716-03-02  R4-1900570,  R4-1906228  TS 36.101:  R4-1905010 | Yes | Yes | None |
| CA\_3BDL\_1A-3A-42D\_2UL\_ 1A-42C\_BCS0 | REL-12 | Yuta Oguma,  NTT DOCOMO | TR 36.716-03-02  R4-1900570,  R4-1906228  TS 36.101:  R4-1905010 | Yes | Yes | None |
| CA\_3BDL\_1A-3A-42D\_2UL\_ 3A-42C\_BCS0 | REL-12 | Yuta Oguma,  NTT DOCOMO | TR 36.716-03-02  R4-1900570,  R4-1906228  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5A-66A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-2A-5A-66A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-2A-5A-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-2A-5A-66A-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-2A-5A-66B\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-2A-5A-66B\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-2A-5A-66C\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-2A-5A-66C\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5A-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5A-66A-66A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5A-66A-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5A-66B\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5A-66B\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5A-66C\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5A-66C\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5B-66A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5B-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5B-66B\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5B-66B\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5B-66C\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-5B-66C\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-13A-66A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1904970  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-13A-66A\_2BUL\_13A-66A\_BSC0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1904970  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-2A-13A-66A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1904970  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-2A-13A-66A\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1904970  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-13A-66A-66A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1904970  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-13A-66A-66A\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1904970  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-13A-66B\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1904970  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-13A-66B\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1904970  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-13A-66C\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1904970  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-13A-66C\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1904970  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-46E-48A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-193035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-46D-48A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1903035  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_2A-48A-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1906042  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_3A-8A-38A\_2BUL\_ 3A-8A\_BCS0 | REL-12 | Zhangpeng, Huawei | TR 36.716-03-02  R4-1906042  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_1A-1A-3C-5A\_2BUL\_ 1A-3A\_BCS0 | REL-12 | Liu Ye, Huawei | TR 36.716-03-02  R4-1904517  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_1A-1A-3C-5A\_2BUL\_ 1A-5A\_BCS0 | REL-12 | Liu Ye, Huawei | TR 36.716-03-02  R4-1904517  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_1A-1A-3C-5A\_2UL\_3A-5A\_BCS0 | REL-12 | Liu Ye, Huawei | TR 36.716-03-02  R4-1904517  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_1A-1A-3C-28A\_2BUL\_ 1A-3A\_BCS0 | REL-12 | Liu Ye, Huawei | TR 36.716-03-02  R4-1904924  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_1A-1A-3C-28A\_2BUL\_ 1A-28A\_BCS0 | REL-12 | Liu Ye, Huawei | TR 36.716-03-02  R4-1904924  TS 36.101:  R4-1905010 | Yes | Yes | None |
| 3BDL\_1A-1A-3C-28A\_2UL\_ 3A-28A\_BCS0 | REL-12 | Liu Ye, Huawei | TR 36.716-03-02  R4-1904924 | Yes | Yes | None |
| 3BDL\_1A-3A-3A-7A\_2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR 36.716-03-02  R4-1906467  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_1A-3A-3A-7A\_2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR 36.716-03-02  R4-1906467  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_1A-3A-3A-7A\_2BUL\_3A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR 36.716-03-02  R4-1906467  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_1A-3A-3A-7A-7A\_2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR 36.716-03-02  R4-1906467  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_1A-3A-3A-7A-7A\_2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR 36.716-03-02  R4-1906467  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_1A-3A-3A-7A-7A\_2BUL\_3A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR 36.716-03-02  R4-1906467  TS 36.101:  R4-1906053 | Yes | Yes | None |
| 3BDL\_2A-14A-30A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-14A-30A\_2BUL\_14A-30A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-14A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-14A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_14A-30A-66A\_2BUL\_14A-30A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_14A-30A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-2A-14A-66A\_2BUL\_2A-14A-BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-2A-14A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_14A-30A-66A-66A\_2BUL\_14A-30A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_14A-30A-66A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-14A-66A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-14A-66A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-2A-14A-66A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-2A-14A-66A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-14A-66A-66A-66A\_2BUL\_2A-14A-BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-14A-66A-66A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 3BDL\_2A-13A-46A-46D\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3BDL\_2A-13A-46A-46C\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3BDL\_2A-13A-46C\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3BDL\_2A-13A-46A-46A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-13A-46A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-13A-46E\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-46E-66A\_2BUL\_2A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-46D-66A\_2BUL\_2A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-46C-66A\_2BUL\_2A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-46A-66A\_2BUL\_2A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-48A-66A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_13A-48A-66A\_2BUL\_13A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_13A-48A-66A\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_13A-48A-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-46D-48C\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_46D-48C-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-46C-48C\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-46D-48A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_46C-48C-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_46A-48C-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_46D-48A-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-48C-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-48C-66A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-46A-48C\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-46C-48A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_2A-46A-48A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_46C-48A-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_46A-48A-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02  R4-1911289  TS 36.101:  R4-1911438 | Yes | Yes | None |
| 3DL\_1A-7A-20A\_2BUL\_1A-7A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | TR 36.716-03-02  R4-1914535  TS 36.101:  R4-1913963 | Yes | Yes | None |
| 3DL\_1A-7A-20A\_2BUL\_1A-20A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | TR 36.716-03-02  R4-1914535  TS 36.101:  R4-1913963 | Yes | Yes | None |
| 3DL\_1A-7A-20A\_2BUL\_7A-20A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | TR 36.716-03-02  R4-1914535  TS 36.101:  R4-1913963 | Yes | Yes | None |
| 3DL\_1A-3A-3A-8A\_2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | 36.101: R4-1908688  TR 36.716-03-02: R4-1910213 | Yes | Yes | None |
| 3DL\_1A-3A-3A-8A\_2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | 36.101: R4-1908688  TR 36.716-03-02: R4-1910213 | Yes | Yes | None |
| 3DL\_1A-3A-3A-8A\_2BUL\_3A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | 36.101: R4-1908688  TR 36.716-03-02: R4-1910213 | Yes | Yes | None |
| 3DL\_1A-7A-8A\_2BUL\_7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | 36.101: R4-1908688  TR 36.716-03-02: R4-1910213 | Yes | Yes | None |
| 3DL\_1A-7A-8A\_2BUL\_7A-8A\_BCS1 | REL-11 | Bo-Han Hsieh, CHTTL | 36.101: R4-1908688  TR 36.716-03-02: R4-1910213 | Yes | Yes | None |
| 3DL\_1A-7A-7A-8A\_2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | 36.101: R4-1908688  TR 36.716-03-02: R4-1910213 | Yes | Yes | None |
| 3DL\_1A-7A-7A-8A\_2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | 36.101: R4-1908688  TR 36.716-03-02: R4-1910213 | Yes | Yes | None |
| 3DL\_1A-7A-7A-8A\_2BUL\_7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | 36.101: R4-1908688  TR 36.716-03-02: R4-1910213 | Yes | Yes | None |
| 3BDL\_2A-48A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48A-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48A-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48A-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-48D-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48D-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-48D-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48C-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-48C-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48D-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-48D-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48E-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48E-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-48E-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48E-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-48E-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-48E-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-13A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-13A-48A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-13A-48A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 3BDL\_2A-48A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_13A-48A-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48A-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48A-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48C-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48C-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48C-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-13A-48C\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-13A-48C\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-13A-48C\_2BUL\_2A-13A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-13A-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 3BDL\_13A-48D-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48D-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48C-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48C-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-13A-48D\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-13A-48D\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48D-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_13A-48D-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_5A-48A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-5A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-5A-48A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: | Yes | Yes | None |
| 3BDL\_2A-5A-48A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
|  |  |  |  |  |  |  |
| 3BDL\_5A-48C-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48C-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_5A-48C-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48A-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48A-66A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_5A-48A-66A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-5A-48C\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-5A-48C\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-5A-48C\_2BUL\_2A-5A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-5A-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-5A-66A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48D-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48D-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48C-66A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_5A-48C-66A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_2A-5A-48D\_2BUL\_2A-5A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-5A-48D\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_2A-5A-48D\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_5A-48D-66A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02: R4-2001238 | Yes | Yes | None |
| 3BDL\_5A-48D-66A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 3BDL\_1A-18A-41C\_2BUL\_CA\_1A-18A\_BCS0 | Rel-11 | Li yankun,Samsung |  | No | No | Work not started |
| 3BDL\_1A-18A-41C\_2BUL\_CA\_1A-41A\_BCS0 | Rel-11 | Li yankun,Samsung |  | No | No | Work not started |
| 3BDL\_1A-18A-41C\_2BUL\_CA\_1A-41C\_BCS0 | Rel-11 | Li yankun,Samsung |  | No | No | Work not started |
| 3BDL\_1A-18A-41C\_2BUL\_CA\_18A-41A\_BCS0 | Rel-11 | Li yankun,Samsung |  | No | No | Work not started |
| 3BDL\_1A-18A-41C\_2BUL\_CA\_18A-41C\_BCS0 | Rel-11 | Li yankun,Samsung |  | No | No | Work not started |
| 3BDL\_1A-18A-41A\_2BUL\_CA\_1A-18A\_BCS0 | Rel-11 | Li yankun,Samsung |  | No | No | Work not started |
| 3BDL\_1A-18A-41A\_2BUL\_CA\_1A-41A\_BCS0 | Rel-11 | Li yankun,Samsung |  | No | No | Work not started |
| 3BDL\_1A-18A-41A\_2BUL\_CA\_18A-41A\_BCS0 | Rel-11 | Li yankun,Samsung |  | No | No | Work not started |
| 3BDL\_2A-12A-30A\_2BUL\_CA\_2A-12A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-12A-30A\_2BUL\_CA\_2A-30A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-12A-30A\_2BUL\_CA\_12A-30A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-12A-66A\_2BUL\_CA\_2A-12A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-12A-66A\_2BUL\_CA\_2A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-12A-66A\_2BUL\_CA\_12A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-30A-66A\_2BUL\_CA\_2A-30A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-30A-66A\_2BUL\_CA\_2A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-30A-66A\_2BUL\_CA\_30A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_12A-30A-66A\_2BUL\_CA\_12A-30A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_12A-30A-66A\_2BUL\_CA\_12A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_12A-30A-66A\_2BUL\_CA\_30A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-29A-30A\_2BUL\_CA\_2A-30A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-29A-66A\_2BUL\_CA\_2A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_29A-30A-66A\_2BUL\_CA\_30A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-12A-66A-66A\_2BUL\_CA\_2A-12A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-12A-66A-66A\_2BUL\_CA\_2A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-12A-66A-66A\_2BUL\_CA\_12A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-12A-66A-66A\_2BUL\_CA\_66A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_12A-30A-66A-66A\_2BUL\_CA\_12A-30A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_12A-30A-66A-66A\_2BUL\_CA\_12A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_12A-30A-66A-66A\_2BUL\_CA\_30A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_12A-30A-66A-66A\_2BUL\_CA\_66A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-30A\_2BUL\_CA\_2A-2A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-30A\_2BUL\_CA\_2A-12A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-30A\_2BUL\_CA\_2A-30A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-30A\_2BUL\_CA\_12A-30A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-66A\_2BUL\_CA\_2A-2A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-66A\_2BUL\_CA\_2A-12A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-66A\_2BUL\_CA\_2A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-66A\_2BUL\_CA\_12A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-5A-30A\_2BUL\_CA\_2A-2A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-5A-30A\_2BUL\_CA\_2A-5A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-5A-30A\_2BUL\_CA\_2A-30A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-5A-30A\_2BUL\_CA\_5A-30A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-66A-66A\_2BUL\_CA\_2A-2A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-66A-66A\_2BUL\_CA\_2A-12A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-66A-66A\_2BUL\_CA\_2A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-66A-66A\_2BUL\_CA\_12A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |
| 3BDL\_2A-2A-12A-66A-66A\_2BUL\_CA\_30A-66A\_BCS0 | Rel-11 | AT&T, Marc Grant, |  | No | No | Work not started |

Table 2.4.2-2 Progress of Core part WI (4BDL/2BUL CA)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CA combination | REL-indep.  from | contact  name, company | CRs provided to RAN  spec: RAN4 Tdoc  (list all specs and the TR input) | Core part  completed?  yes/no | Perf. part  completed?  yes/no | open issues/comments |
| **Rel16 LTE inter-band CA for 4 bands DL with 2 band UL CA** | | | | | | |
| CA\_4BDL\_CA\_2A-13A-48C-66A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814932  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_CA\_2A-13A-48C-66A\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814932  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_2A-13A-48A-48A-66A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814932  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_2A-13A-48A-48A-66A\_2BUL\_13A-66A \_BCS0 | REL-11 | Zheng Zhao, Verizon | TR 36.716-03-02: R4-1814932  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-8A-38A\_2BUL\_ 1A-3A\_BCS0 | REL-12 | Zhangpeng, Huawei | TR36.716-03-02: R4-1900778  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-8A-38A\_2BUL\_ 1A-8A\_BCS0 | REL-12 | Zhangpeng, Huawei | TR36.716-03-02: R4-1900778  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-8A-38A\_2BUL\_ 3A-8A\_BCS0 | REL-12 | Zhangpeng, Huawei | TR36.716-03-02: R4-1900778  TS36.101:  R4-1905010 | Yes | Yes | None |
| CA\_4BDL\_2A-46E-48A-66A\_2BUL\_CA\_2A-48A | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| CA\_4BDL\_2A-46E-48A-66A\_2BUL\_CA\_66A-48A | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41C-42C\_2BUL\_CA\_1A-3A\_BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41C-42C\_2BUL\_CA\_1A-42A\_BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41C-42C\_2BUL\_CA\_1A-42C\_BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41C-42C\_2BUL\_CA\_3A-42A\_BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41C-42C\_2BUL\_CA\_3A-42C\_BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41C-42A\_2BUL\_CA\_1A-3A-BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41C-42A\_2BUL\_CA\_1A-42A-BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41C-42A\_2BUL\_CA\_3A-42A-BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41A-42C\_2BUL\_CA\_1A-3A-BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41A-42C\_2BUL\_CA\_1A-42A-BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41A-42C\_2BUL\_CA\_1A-42C-BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41A-42C\_2BUL\_CA\_3A-42A-BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41A-42C\_2BUL\_CA\_3A-42C-BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41A-42A\_2BUL\_CA\_1A-3A\_BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41A-42A\_2BUL\_CA\_1A-42A\_BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| CA\_4BDL\_1A-3A-41A-42A\_2BUL\_CA\_3A-42A\_BCS0 | REL-12 | Xiao Shao, KDDI | TR36.716-03-02: R4-1900568  TS 36.101:  R4-1900226 | Yes | Yes | None |
| 4BDL\_2A-14A-30A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-14A-30A--66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-2A-14A-30A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-2A-14A-30A-66A\_2BUL\_14A-30A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-2A-14A-30A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-14A-30A-66A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-14A-30A-66A-66A\_2BUL\_14A-30A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-14A-30A-66A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-13A-46E-66A \_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-13A-46D-66A 2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-13A-46C-66A 2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-13A-46A-66A 2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46D-48C-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46D-48C-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46C-48C-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46D-48A-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46C-48C-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46D-48A-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46A-48C-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46C-48A-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46A-48A-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46A-48C-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46C-48A-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_2A-46A-48A-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | TR36.716-03-02: R4-1912585  TS36.101:  R4-1911438 | Yes | Yes | None |
| 4BDL\_1A-3A-7A-20A 2BUL\_1A-3A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | TR36.716-03-02: R4-1914536  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_1A-3A-7A-20A 2BUL\_1A-7A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | TR36.716-03-02: R4-1914536  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_1A-3A-7A-20A 2BUL\_1A-20A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | TR36.716-03-02: R4-1914536  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_1A-3A-7A-20A 2BUL\_3A-7A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | TR36.716-03-02: R4-1914536  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_1A-3A-7A-20A 2BUL\_3A-20A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | TR36.716-03-02: R4-1914536  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_1A-3A-7A-20A 2BUL\_7A-20A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | TR36.716-03-02: R4-1914536  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-7A-8A 2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-7A-8A 2BUL\_1A-8A\_BCS1 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-7A-8A 2BUL\_7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-7A-8A 2BUL\_7A-8A\_BCS1 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_3A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_3A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_3A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_3A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_3A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_3A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | TR36.716-03-02: R4-1913854  TS36.101:  R4-1913963 | Yes | Yes | None |
| 4BDL\_2A-13A-48A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48C-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48C-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48C-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48C-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48C-66A\_2BUL\_13A-48A\_CS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48A-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48A-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48A-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48A-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48A-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48C-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48C-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48C-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48C-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48D-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48D-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48D-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48D-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48D-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48D-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48D-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48D-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-13A-48D-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A\_2BUL\_2A-5A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A\_2BUL\_2A-5A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48A-66A-66A\_2BUL\_2A-5A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48C-66A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48D-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48D-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48D-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48D-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48D-66A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-5A-48D-66A-66A\_2BUL\_2A-5A\_BCS0 | Rel-11 | Zheng Zhao, Verizon | 36.101: R4-2001169 TR 36.716-03-02 | Yes | Yes | None |
| 4BDL\_2A-12A-30A-66A\_2BUL\_2A-12A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-12A-30A-66A\_2BUL\_2A-30A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-12A-30A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-12A-30A-66A\_2BUL\_12A-30A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-12A-30A-66A\_2BUL\_12A-66A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-12A-30A-66A\_2BUL\_30A-66A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-29A-30A-66A\_2BUL\_2A-30A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-29A-30A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-29A-30A-66A\_2BUL\_30A-66A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-2A-12A-30A-66A\_2BUL\_2A-2A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-2A-12A-30A-66A\_2BUL\_2A-12A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-2A-12A-30A-66A\_2BUL\_2A-30A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-2A-12A-30A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-2A-12A-30A-66A\_2BUL\_12A-30A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-2A-12A-30A-66A\_2BUL\_12A-66A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |
| 4BDL\_2A-2A-12A-30A-66A\_2BUL\_30A-66A\_BCS0 | Rel-11 | Marc Grant, AT&T |  | No | No | Work not started |

## 2.5 RAN5

#### 2.5.1 Agreements

#### 2.5.2 Remaining Open issues

#### 2.5.3 Remaining Open issues with cross-WG dependencies

## 2.6 RAN6

#### 2.6.1 Agreements

#### 2.6.2 Remaining Open issues

## 3. Detailed progress in SA/CT WGs since last TSG meeting (for all involved WGs)

NOTE: This section only needs to be filled in for WI/SIs where there is a corresponding relevant WI/SI in SA/CT.

## 3.1 SAx/CTs

#### 3.1.1 Agreements with cross-TSG impacts

#### 3.1.2 Remaining Open issues with cross-TSG impacts

NOTE: This section should also flag any critical dependencies that need TSG attention.

## 4. References

NOTE: This can be e.g. a list of all related Tdocs in the affected WGs since last TSG, references to LSs, produced TRs/TSs, the work/study item description or status reports of previous TSGs.

RAN4 #94-e

[1] R4-2001040, “TR 36.716-03-02 v0.9.0 LTE-A x bands DL (x=3,4,5) with 2 bands UL inter-band CA in Rel-16

[2] R4-2001041, “Revised WID on x bands (x=3,4,5) DL with 2 bands UL inter-band CA in Rel-16”

[3] R4-2001169, “Introduction of LTE-A inter-band CA Rel-16 for new x bands (x=3,4,5) DL with 2 bands UL into  
TS 36.101”

[4] R4-2001237, “TP on summary of self-interference analysis for new x bands (x=3,4,5) DL with 2 bands UL”

[5] R4-2001238, “MSD results for new LTE-A CA band combinations in rel-16”

27.02.2019 minor adaptations for RAN #83

21.11.2018 completion level swith colours added (for RAN #82)

v04.81 31.07.2018 simplification of template and addition of cross-TSG aspects

v04.80 21.05.2018 minor adaptations for RAN #80

v04.79 26.02.2018 minor adaptations for RAN #79

v04.78 18.11.2017 minor adaptations for RAN #78

v04.77 06.08.2017 minor adaptations for RAN #77

v04.76 15.05.2017 minor adaptations for RAN #76

v04.75 31.01.2017 minor adaptations for RAN #75

v04.74 28.10.2016 minor adaptations for RAN #74

v04.73 01.09.2016 adaptations for RAN #73 (time units in extra Excel table, RAN6 reporting included)

v04.72 26.05.2016 adaptations for RAN #72 (introduction of NR & GERAN TUs)

v04.71 10.02.2016 minor adaptations for RAN #71

v04.70 30.10.2015 minor adaptations for RAN #70

v04.69 12.08.2015 minor adaptations for RAN #69

v04.68 21.05.2015 minor adaptations for RAN #68

v04.67 01.02.2015 minor adaptations for RAN #67

v04.66 16.11.2014 minor adaptations for RAN #66

v04.65 16.08.2014 minor adaptations for RAN #65

v04.64 22.05.2014 minor adaptations for RAN #64

v04.63 24.01.2014 restructuring for RAN #63 to cover Core & Perf. in one doc file

v03.62 11.11.2013 section 1.2.3 adapted for RAN #62

v03 11.08.2013 section 1.2.3 added on time budget

v02 07.05.2010 history added, some spelling corrections

v01 13.11.2009 First version of the template