**3****GPP TSG RAN WG1 #106b-e R1-xxxxxx**

**e-Meeting, October 11th – 19th**

**Agenda item:** **8.14.1**

**Title: [DRAFT] Observations for XR capacity evaluations in TR**

**Source: Qualcomm**

**Document for: Discussion**

This document is to collect comments from companies regarding observations for XR power evaluation based on contributions under AI 8.14.1.

# XR UE Power Consumption Evaluation

This section includes the baseline power consumption results. PS schemes considered in baseline evaluation includes AlwaysOn, R15/16/17 power saving schemes such as CDRX, cross slot scheduling, PDCCH skipping, BWP, etc. Genie performance is also captured to show the potential upper bound of power saving opportunity.

## FR1

### DL+UL Joint Evaluation

#### DU

Table 1 Summary of FR1, DL+UL joint power evaluation results for DU

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | System Load | PS Gain (%), Note 1 | | Source |
| Mean (%) | Range (%) |
| DU | VR | 30 | R15/16 CDRX | High | [2.92] | [2.24 ~ 3.31] | vivo, Ericsson, QC |
| Low | [3] | [2.44 ~ 3.56] | vivo |
| R17 PDCCH skipping | High | [19.88] |  | vivo |
| Low | [21.06] |  | vivo |
| 45 | R15/16 CDRX | High | [5.06] | [3.04 ~ 7.08] | QC |
| Low |  |  |  |
| CG | 30 | R15/16 CDRX | High | [4.52] | [2.85~7] | Ericsson, QC |
| Low |  |  |  |
| AR (UL 1 stream) | 30 | R15/16 CDRX | High | [2.1] | [1.62 ~ 2.56] | vivo |
| Low | [3.09] | [2.39 ~ 3.79] | vivo |
| R17 PDCCH skipping | High | [12.25] |  | vivo |
| Low | [18.26] |  | vivo |
| AR (UL 2 streams) | 30 | R15/16 CDRX | High | [2.57] | [0.79 ~ 4.29] | vivo, QC |
| Low | [1.27] | [0.91 ~ 1.63] | vivo |
| R17 PDCCH skipping | High | [11.25] |  | vivo |
| Low | [12.12] |  | vivo |
| Note 1 : PSG was computed for the cases only with marginal loss in % of DL+UL satisfied UE. | | | | | | |  |

1. **Please provide your comment on the above summary table.**

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| Company | Comment |
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##### VR

**General Observations**

* In FR1, DL+UL joint evaluation, DU, VR30 and high load, the R15/16CDRX scheme provides the mean power saving gain of [3.94]% in the range of [2.24 ~ 7.0%] with *marginal* loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, DU, VR30 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain is [19.88]% with marginal loss in DL+UL UE satisfied rate

Table 2 Source specific data: FR1, DL+UL, DU, VR 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index\* | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 230 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 13 | 13 | 0.00% | 0.00% | 92.43% | - |
| vivo | 231 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 13 | 13 | 0.00% | 0.00% | 90.11% | 3.31% |
| vivo | 232 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 13 | 13 | 0.00% | 0.00% | 91.58% | 2.24% |
| vivo | 234 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 13 | 13 | 0.00% | 0.00% | 92.19% | 19.98% |
| Ericsson | 10 | R1-2110144 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 4 | 4 | 0.00% | 0.00% | 90.00% | 0.00% |
| Ericsson | 11 | R1-2110144 | Genie | 0 | 0 | 0 | 0 | H | 4 | 4 | 0.00% | 0.00% | 90.00% | 17.00% |
| Ericsson | 12 | R1-2110144 | R15/16CDRX | 4 | 3 | 0 | 0 | H | 4 | 4 | 0.00% | 0.00% | 80.00% | 7.00% |
| QC | 5 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 11 | 11 | 95.33% | 99.74% | 95.33% | 0.00% |
| QC | 6 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 11 | 11 | 94.37% | 99.74% | 94.37% | 3.22% |
| QC | 7 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 11 | 11 | 91.00% | 50.82% | 47.53% | 7.30% |
| QC | 8 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 11 | 11 | 95.33% | 99.74% | 95.33% | 18.18% |
| QC | 54 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 11 | 11 | 97.14% | 100.00% | 97.14% | 0.00% |
| QC | 55 | R1-2110216 | R15/16CDRX | 16 | 12 | 12 | 0 | H | 11 | 11 | 89.35% | 79.83% | 69.87% | 1.78% |
| QC | 58 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 11 | 11 | 97.14% | 100.00% | 97.14% | 24.62% |
| \*data row index N means it is the N’th row in the results sheet each company has provided. | | | | | | | | | | | | | | |

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, DU, VR30, low load, the R15/16CDRX scheme provides the mean power saving gain of [3]% in the range of [2.44 ~ 3.56%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, DU, VR30, low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [21.06]% with marginal loss in DL+UL UE satisfied rate.

Table 3 Source specific data: FR1, DL+UL, DU, VR 30Mbps, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 224 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 7 | 13 | 0.00% | 0.00% | 100.00% | - |
| vivo | 225 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 7 | 13 | 0.00% | 0.00% | 100.00% | 3.56% |
| vivo | 226 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 7 | 13 | 0.00% | 0.00% | 100.00% | 2.44% |
| vivo | 228 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 7 | 13 | 0.00% | 0.00% | 100.00% | 21.06% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, DU, VR45, high load, the R15/16CDRX scheme provides the mean power saving gain of [5.06]% in the range of [3.04 ~ 7.08%] with marginal loss in DL+UL UE satisfied rate.

Table 4 Source specific data: FR1, DL+UL, DU, VR 45Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| QC | 17 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 7 | 7 | 95.13% | 100.00% | 95.13% | 0.00% |
| QC | 18 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 7 | 7 | 94.29% | 100.00% | 94.29% | 3.04% |
| QC | 19 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 7 | 7 | 89.66% | 47.62% | 43.54% | 7.08% |
| QC | 20 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 7 | 7 | 95.13% | 100.00% | 95.13% | 17.36% |

1. **Please provide your comment on the above observations.**

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##### CG

**General Observations**

* In FR1, DL+UL joint evaluation, DU, CG30, high load, the power saving gain of R15/16CDRX scheme provides the mean power saving gain is [4.52]% in the range of [2.85 ~ 7%] with marginal loss in DL+UL UE satisfied rate.

Table 5 Source specific data: FR1, DL+UL, DU, CG 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| Ericsson | 1 | R1-2110144 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 4 | 4 | 0.00% | 0.00% | 90.00% | 0.00% |
| Ericsson | 2 | R1-2110144 | Genie | 0 | 0 | 0 | 0 | H | 4 | 4 | 0.00% | 0.00% | 90.00% | 17.00% |
| Ericsson | 3 | R1-2110144 | R15/16CDRX | 4 | 3 | 0 | 0 | H | 4 | 4 | 0.00% | 0.00% | 89.00% | 7.00% |
| QC | 29 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 15 | 15 | 91.75% | 99.87% | 91.75% | 0.00% |
| QC | 30 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 15 | 15 | 91.68% | 51.05% | 47.05% | 6.66% |
| QC | 31 | R1-2110216 | R15/16CDRX | 8 | 4 | 6 | 0 | H | 15 | 15 | 91.62% | 99.87% | 91.62% | 3.73% |
| QC | 32 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 15 | 15 | 91.75% | 99.87% | 91.75% | 2.85% |
| QC | 33 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 15 | 15 | 91.75% | 99.87% | 91.75% | 17.74% |

No results available for FR1, DL+UL, DU, CG30, low load

1. **Please provide your comment on the above observations.**

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| Company | Comment |
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##### AR

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, DU, AR30 w/ UL 1 stream, high load, the R15/16CDRX provides the mean power saving gain is [2.1]% in the range of [1.62 ~ 2.56%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, DU, AR30 w/ UL 1 stream, high load, the R17 PDCCH skipping provides the mean power saving gain is [12.25]% with marginal loss in DL+UL UE satisfied rate.

Table 6 Source specific data: FR1, DL+UL, DU, AR 30Mbps w/ UL 1 stream, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 254 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 9 | 9 | 0.00% | 0.00% | 92.59% | - |
| vivo | 255 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 9 | 9 | 0.00% | 0.00% | 91.89% | 2.58% |
| vivo | 256 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 9 | 9 | 0.00% | 0.00% | 92.06% | 1.62% |
| vivo | 258 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 9 | 9 | 0.00% | 0.00% | 92.24% | 12.25% |

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, DU, AR30 w/ UL 1 stream, low load, the R15/16CDRX provides the mean power saving gain is [3.09]% in the range of [2.39 ~ 3.79%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, DU, AR30 w/ UL 1 stream, low load, the R17 PDCCH skipping provides the mean power saving gain is [18.26]% with marginal loss in DL+UL UE satisfied rate.

Table 7 Source specific data: FR1, DL+UL, DU, AR 30Mbps w/ UL 1 stream, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 248 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 5 | 9 | 0.00% | 0.00% | 96.51% | - |
| vivo | 249 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 5 | 9 | 0.00% | 0.00% | 96.19% | 3.79% |
| vivo | 250 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 5 | 9 | 0.00% | 0.00% | 96.51% | 2.39% |
| vivo | 252 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 5 | 9 | 0.00% | 0.00% | 96.19% | 18.26% |

**General Observations**

* In FR1, DL+UL joint evaluation, DU, AR30 w/ UL 2 streams, high load, the R15/16CDRX provides the mean power saving gain is [2.57]% in the range of [0.79 ~ 4.29%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, DU, AR30 w/ UL 2 streams, high load, the R17 PDCCH skipping provides the mean power saving gain is [11.25]% with marginal loss in DL+UL UE satisfied rate.

Table 8 Source specific data: FR1, DL+UL, DU, AR 30Mbps w/ UL 2 stream, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 278 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 7 | 7 | 0.00% | 0.00% | 92.06% | - |
| vivo | 279 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 7 | 7 | 0.00% | 0.00% | 91.16% | 1.51% |
| vivo | 280 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 7 | 7 | 0.00% | 0.00% | 91.61% | 0.79% |
| vivo | 282 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 7 | 7 | 0.00% | 0.00% | 91.61% | 11.25% |
| QC | 44 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 3 | 3 | 99.80% | 94.05% | 93.85% | 0.00% |
| QC | 45 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 3 | 3 | 99.80% | 44.44% | 44.44% | 7.80% |
| QC | 46 | R1-2110216 | R15/16CDRX | 8 | 4 | 6 | 0 | H | 3 | 3 | 99.80% | 94.44% | 94.25% | 4.29% |
| QC | 47 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 3 | 3 | 99.77% | 94.33% | 94.10% | 3.67% |

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, DU, AR30 w/ UL 2 streams, low load, the R15/16CDRX provides the mean power saving gain is [1.27]% in the range of [0.91% ~ 1.63%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, DU, AR30 w/ UL 2 streams, low load, the R17 PDCCH skipping provides the mean power saving gain is [12.12]% with marginal loss in DL+UL UE satisfied rate.

Table 9 Source specific data: FR1, DL+UL, DU, AR 30Mbps w/ UL 2 stream, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 272 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 4 | 7 | 0.00% | 0.00% | 100.00% | - |
| vivo | 273 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 4 | 7 | 0.00% | 0.00% | 100.00% | 1.63% |
| vivo | 274 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 4 | 7 | 0.00% | 0.00% | 100.00% | 0.91% |
| vivo | 276 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 4 | 7 | 0.00% | 0.00% | 100.00% | 12.12% |

1. **Please provide your comment on the above observations.**

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#### InH

Table 10 Summary of FR1, DL+UL joint power evaluation results for InH

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | System Load | PS Gain (%), Note 1 | | Source | |
| Mean (%) | Range (%) |
| InH | VR | 30 | R15/16 CDRX | High | [2.99] | [2.33 ~ 3.45] | Vivo, QC | |
| Low | [3.18] | [2.64 ~ 3.71] | vivo | |
| R17 PDCCH skipping | High | [21.87] |  | vivo | |
| Low | [22.35] |  | vivo | |
| 45 | R15/16 CDRX | High | [2.91] |  | vivo | |
| Low |  |  |  | |
| CG | 30 | R15/16 CDRX | High | [3.27] | [2.85 ~ 3.68] | QC | |
| Low |  |  |  | |
| AR (UL 1 stream) | 30 | R15/16 CDRX | High | [2.16] | [1.69 ~ 2.62] | vivo | |
| Low | [3.4] | [2.59 ~ 4.2] | vivo | |
| R17 PDCCH skipping | High | [13.28] |  | vivo | |
| Low | [21.17] |  | vivo | |
| AR (UL 2 streams) | 30 | R15/16 CDRX | High | [3.72] | [0.83 ~ 8.04] | vivo, QC | |
| Low | [1.42] | [1.02 ~ 1.81] | vivo | |
| R17 PDCCH skipping | High | [12.51] |  | vivo | |
| Low | [14.47] |  | vivo | |
| Note 1 : PSG was computed for the cases only with marginal loss in % of DL+UL satisfied UE. | | | | | | | |  |

1. **Please provide your comment on the above summary table.**

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| Company | Comment |
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##### VRs

**General Observations**

* In FR1, DL+UL joint evaluation, InH, VR30, high load, the R15/16CDRX provides the mean power saving gain is [2.99]% in the range of [2.33 ~ 3.45%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, InH, VR30, high load, the R17 PDCCH skipping provides the mean power saving gain is [21.87]% with marginal loss in DL+UL UE satisfied rate.

Table 11 Source specific data: FR1, DL+UL, InH, VR 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| ZTE, Sanechips | 1 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | H | 11 | 11 | 93.18% | 100.00% | 0.00% | 0.00% |
| ZTE, Sanechips | 2 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | H | 11 | 11 | 93.18% | 100.00% | 0.00% | 0.00% |
| ZTE, Sanechips | 11 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | H | 11 | 11 | 93.20% | 100.00% | 0.00% | 0.00% |
| ZTE, Sanechips | 12 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | H | 11 | 11 | 93.20% | 100.00% | 0.00% | 0.00% |
| vivo | 218 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 10 | 10 | 0.00% | 0.00% | 92.50% | - |
| vivo | 219 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 10 | 10 | 0.00% | 0.00% | 91.25% | 3.45% |
| vivo | 220 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 10 | 10 | 0.00% | 0.00% | 91.81% | 2.33% |
| vivo | 222 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 10 | 10 | 0.00% | 0.00% | 91.81% | 21.78% |
| QC | 9 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 9 | 9 | 92.73% | 100.00% | 92.73% | 0.00% |
| QC | 10 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 9 | 9 | 92.59% | 100.00% | 92.59% | 3.18% |
| QC | 11 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 9 | 9 | 89.29% | 49.74% | 43.92% | 7.18% |
| QC | 12 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 9 | 9 | 92.73% | 100.00% | 92.73% | 20.38% |
| Note 1. DL and UL were simulated separately and collected traces are combined as a single timeline for DL+UL joint power evaluation. | | | | | | | | | | | | | | |

**General Observations**

* In FR1, DL+UL joint evaluation, InH, VR30, low load, the R15/16CDRX provides the mean power saving gain is [3.18]% in the range of [2.64 ~ 3.71%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, InH, VR30, low load, the R17 PDCCH skipping provides the mean power saving gain is [22.35]% with marginal loss in DL+UL UE satisfied rate.

Table 12 Source specific data: FR1, DL+UL, InH, VR 30Mbps, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| ZTE, Sanechips | 3 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | L | 10 | 11 | 93.00% | 100.00% | 0.00% | 0.00% |
| ZTE, Sanechips | 4 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | L | 10 | 11 | 93.00% | 100.00% | 0.00% | 0.00% |
| ZTE, Sanechips | 13 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | L | 10 | 11 | 93.30% | 100.00% | 0.00% | 0.00% |
| ZTE, Sanechips | 14 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | L | 10 | 11 | 93.30% | 100.00% | 0.00% | 0.00% |
| vivo | 212 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 5 | 10 | 0.00% | 0.00% | 100.00% | - |
| vivo | 213 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 3.71% |
| vivo | 214 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 2.64% |
| vivo | 216 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 22.35% |
| Note 1. DL and UL were simulated separately and collected traces are combined as a single timeline for DL+UL joint power evaluation. | | | | | | | | | | | | | | |

**General Observations**

* In FR1, DL+UL joint evaluation, InH, VR45, high load, the R15/16CDRX provides the mean power saving gain is [2.91]% with marginal loss in DL+UL UE satisfied rate.

Table 13 Source specific data: FR1, DL+UL, InH, VR 45Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| ZTE, Sanechips | 19 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | H | 7 | 7 | 91.00% | 100.00% | 0.00% | 0.00% |
| ZTE, Sanechips | 20 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | H | 7 | 7 | 91.00% | 100.00% | 0.00% | 0.00% |
| QC | 21 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 6 | 6 | 90.59% | 100.00% | 90.59% | 0.00% |
| QC | 22 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 6 | 6 | 89.82% | 100.00% | 89.82% | 2.91% |
| QC | 23 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 6 | 6 | 82.56% | 49.69% | 40.59% | 6.69% |
| QC | 24 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 6 | 6 | 90.59% | 100.00% | 90.59% | 19.34% |
| Note 1. DL and UL were simulated separately and collected traces are combined as a single timeline for DL+UL joint power evaluation. | | | | | | | | | | | | | | |

No results available for FR1, DL+UL, InH, VR45, low load case.

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### CG

**General Observations**

* In FR1, DL+UL joint evaluation, InH, CG30, high load, the R15/16CDRX provides the mean power saving gain is [3.27]% in the range of [2.85 ~ 3.68%] with marginal loss in DL+UL UE satisfied rate.

Table 14 Source specific data: FR1, DL+UL, InH, CG 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| ZTE, Sanechips | 23 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | H | 12 | 12 | 96.53% | 100.00% | 0.00% | 0.00% |
| ZTE, Sanechips | 24 | R1-2108889 | AlwaysOn-baseline | 0 | 0 | 0 | Note 1 | H | 12 | 12 | 96.53% | 100.00% | 0.00% | 0.00% |
| QC | 34 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 11 | 11 | 91.36% | 100.00% | 91.36% | 0.00% |
| QC | 35 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 11 | 11 | 91.67% | 49.09% | 45.15% | 6.69% |
| QC | 36 | R1-2110216 | R15/16CDRX | 8 | 4 | 6 | 0 | H | 11 | 11 | 91.97% | 100.00% | 91.97% | 3.68% |
| QC | 37 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 11 | 11 | 91.36% | 100.00% | 91.36% | 2.85% |
| QC | 38 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 11 | 11 | 91.36% | 100.00% | 91.36% | 19.70% |
| Note 1. DL and UL were simulated separately and collected traces are combined as a single timeline for DL+UL joint power evaluation. | | | | | | | | | | | | | | |

No results available for FR1, DL+UL, InH, CG30, low load case.

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### AR

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, InH, AR30 w/ UL 1 stream, high load, the R15/16CDRX provides the mean power saving gain is [2.16]% in the range of [1.69 ~ 2.62%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, InH, AR30 w/ UL 1 stream, high load, the R17 PDCCH skipping provides the mean power saving gain is [13.28]% with marginal loss in DL+UL UE satisfied rate.

Table 15 Source specific data: FR1, DL+UL, InH, AR 30Mbps, UL 1 stream, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 242 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 10 | 10 | 0.00% | 0.00% | 92.50% | - |
| vivo | 243 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 10 | 10 | 0.00% | 0.00% | 91.67% | 2.62% |
| vivo | 244 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 10 | 10 | 0.00% | 0.00% | 91.94% | 1.69% |
| vivo | 246 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 10 | 10 | 0.00% | 0.00% | 91.94% | 13.28% |

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, InH, AR30 w/ UL 1 stream, low load, the R15/16CDRX provides the mean power saving gain is [3.4]% in the range of [2.59 ~ 4.2%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, InH, AR30 w/ UL 1 stream, low load, the R17 PDCCH skipping provides the mean power saving gain is [21.17]% with marginal loss in DL+UL UE satisfied rate.

Table 16 Source specific data: FR1, DL+UL, InH, AR 30Mps, UL 1 stream, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 236 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 5 | 10 | 0.00% | 0.00% | 100.00% | - |
| vivo | 237 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 4.20% |
| vivo | 238 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 2.59% |
| vivo | 240 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 21.17% |

**General Observations**

* In FR1, DL+UL joint evaluation, InH, AR30 w/ UL 2 streams, high load, the R15/16CDRX provides the mean power saving gain is [3.72]% in the range of [0.83 ~ 8.04%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, InH, AR30 w/ UL 2 streams, high load, the R17 PDCCH skipping provides the mean power saving gain is [12.51]% with marginal loss in DL+UL UE satisfied rate.

Table 17 Source specific data: FR1, DL+UL, InH, AR 30Mbps, UL 2 streams, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 266 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 10 | 10 | 0.00% | 0.00% | 92.22% | - |
| vivo | 267 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 10 | 10 | 0.00% | 0.00% | 90.83% | 1.59% |
| vivo | 268 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 10 | 10 | 0.00% | 0.00% | 91.67% | 0.83% |
| vivo | 270 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 10 | 10 | 0.00% | 0.00% | 91.67% | 12.51% |
| vivo | 271 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | H | 10 | 10 | 0.00% | 0.00% | 91.11% | 30.45% |
| QC | 49 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 3 | 3 | 99.44% | 94.44% | 93.89% | 0.00% |
| QC | 50 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 3 | 3 | 99.44% | 44.44% | 44.44% | 8.04% |
| QC | 51 | R1-2110216 | R15/16CDRX | 8 | 4 | 6 | 0 | H | 3 | 3 | 99.72% | 94.17% | 93.89% | 4.41% |
| QC | 52 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 3 | 3 | 99.44% | 94.72% | 94.44% | 3.72% |
| QC | 53 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 3 | 3 | 99.44% | 94.44% | 93.89% | 20.44% |

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, InH, AR30 w/ UL 2 streams, low load, the R15/16CDRX provides the mean power saving gain is [1.42]% in the range of [1.02 ~ 1.81%] with marginal loss in DL+UL UE satisfied rate.
* In FR1, DL+UL joint evaluation, InH, AR30 w/ UL 2 streams, low load, the R17 PDCCH skipping provides the mean power saving gain is [14.47]% with marginal loss in DL+UL UE satisfied rate.

Table 18 Source specific data: FR1, DL+UL, InH, AR 30Mbps, UL 2 streams, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 260 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 5 | 10 | 0.00% | 0.00% | 100.00% | - |
| vivo | 261 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 1.81% |
| vivo | 262 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 1.02% |
| vivo | 264 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 14.47% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
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|  |  |
|  |  |

#### UMa

Table 19 Summary of FR1, DL+UL joint power evaluation results for UMa

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | System Load | PS Gain (%), Note 1 | | Source |
| Mean (%) | Range (%) |
| UMa | VR | 30 | R15/16 CDRX | High | [3.89] |  | QC |
| 45 | R15/16 CDRX | High | [3.52] |  | QC |
| CG | 30 | R15/16 CDRX | High | [4.1] |  | QC |
| Note 1 : PSG was computed for the cases only with marginal loss in % of DL+UL satisfied UE. | | | | | | | |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### VR

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, UMa, VR30, high load, the R15/16CDRX provides the mean power saving gain is [3.89]% with marginal loss in DL+UL UE satisfied rate.

Table 20 Source specific data: FR1, DL+UL, UMa, VR 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| QC | 13 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 4 | 4 | 93.37% | 94.22% | 93.20% | 0.00% |
| QC | 14 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 4 | 4 | 93.20% | 93.71% | 93.71% | 3.89% |
| QC | 15 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 4 | 4 | 92.86% | 50.00% | 49.66% | 8.19% |
| QC | 16 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 4 | 4 | 93.37% | 94.22% | 93.20% | 8.79% |

No results available for FR1, DL+UL, UMa, VR30, low load

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, UMa, VR45, high load, the R15/16CDRX provides the mean power saving gain is [3.52%] with marginal loss in DL+UL UE satisfied rate.

Table 21 Source specific data: FR1, DL+UL, UMa, VR 45Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| QC | 25 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 3 | 3 | 91.59% | 95.08% | 91.59% | 0.00% |
| QC | 26 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 3 | 3 | 91.59% | 94.92% | 91.59% | 3.52% |
| QC | 27 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 3 | 3 | 90.00% | 48.73% | 45.87% | 7.71% |
| QC | 28 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 3 | 3 | 91.59% | 95.08% | 91.59% | 8.70% |

No results available for FR1, DL+UL, UMa, VR45, low load

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### CG

**Source Specific Observations**

* In FR1, DL+UL joint evaluation, UMa, CG30, high load, the R15/16CDRX provides the mean power saving gain is [4.10]% in the range of [3.51% ~ 4.69%] with marginal loss in DL+UL UE satisfied rate.

Table 22 Source specific data: FR1, DL+UL, UMa, CG 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| QC | 39 | R1-2110216 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 6 | 6 | 91.95% | 92.86% | 91.16% | 0.00% |
| QC | 40 | R1-2110216 | R15/16CDRX | 8 | 6 | 4 | 0 | H | 6 | 6 | 92.06% | 45.58% | 44.79% | 7.72% |
| QC | 41 | R1-2110216 | R15/16CDRX | 8 | 4 | 6 | 0 | H | 6 | 6 | 92.29% | 92.63% | 91.38% | 4.69% |
| QC | 42 | R1-2110216 | R15/16CDRX | 8 | 6 | 6 | 0 | H | 6 | 6 | 92.40% | 92.29% | 91.16% | 3.51% |
| QC | 43 | R1-2110216 | Genie | 0 | 0 | 0 | 0 | H | 6 | 6 | 91.95% | 92.86% | 91.16% | 9.04% |

No results available for FR1, DL+UL, UMa, CG30, low load

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### AR

No results are available.

### DL-only Evaluation

#### DU

Table 23 Summary of FR1, DL-only power evaluation results for DU

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | System Load | PS Gain (%), Note 1 | |
| Mean (%) | Range (%) |
| DU | VR/AR | 30 | R15/16 CDRX | High | [7.27] | [3.03 ~ 21.0] |
| Low | [4.64] | [3.57 ~ 5.76] |
| R17 PDCCH skipping | High | [18.86] |  |
| Low | [22.65] |  |
| 45 | R15/16 CDRX | High | [3.66] | [3.1~4.69] |
| Low | [4.55] | [3.53~5.56] |
| R17 PDCCH skipping | High | [15.69] | [12.66~18.73] |
| Low | [21.95] |  |
| cross-slot scheduling + MIMO layer adaptation by BWP switching | High | [9.33] |  |
| cross-slot scheduling + MIMO layer adaptation + PDCCH skipping by BWP switching | High | [9.78] |  |
| CG | 30 | R15/16 CDRX | High | [8.96] | [3.3 ~ 20] |
| Low | [8.83] | [3.57 ~ 15.2] |
| R17 PDCCH skipping | High | [12.86] |  |
| Low |  |  |
| cross-slot scheduling + MIMO layer adaptation by BWP switching | High | [8.13] |  |
| Low |  |  |
| cross-slot scheduling + MIMO layer adaptation + PDCCH skipping by BWP switching | High | [8.53] |  |
| Low |  |  |
| Note 1 : PSG was computed for the cases only with marginal loss in % of DL satisfied UE. | | | | | | |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### VR/AR

**General Observations**

* In FR1, DL only evaluation, DU, VR/AR30 and high load, the R15/16CDRX scheme provides the mean power saving gain of [7.27]% in the range of [3.03 ~ 21.00%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, DU, VR/AR30 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [18.86]% with *marginal* loss in DL UE satisfied rate.

Table 24 Source specific data: FR1, DL-only, DU, AR/VR 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| Huawei | 1 | R1-2108736 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 5 | 5 | 92.00% | 0.00% |
| Huawei | 2 | R1-2108736 | R15/16CDRX | 10 | 5 | 4 | 0 | H | 5 | 5 | 61.05% | 14.68% |
| Huawei | 3 | R1-2108736 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 5 | 5 | 88.29% | 5.53% |
| Huawei | 4 | R1-2108736 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 5 | 5 | 0.00% | 10.70% |
| Huawei | 5 | R1-2108736 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 5 | 5 | 90.67% | 3.46% |
| vivo | 40 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 13 | 13 | 92.43% | - |
| vivo | 41 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 13 | 13 | 90.11% | 4.70% |
| vivo | 42 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 13 | 13 | 91.58% | 3.03% |
| vivo | 45 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 13 | 13 | 92.43% | 18.86% |
| vivo | 46 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | H | 13 | 13 | 92.43% | 37.83% |
| Nokia | 36 | R1-2110386 | R15/16CDRX | 4 | 2 | 2 | 0 | H | 6 | 6 | 83.00% | 21.00% |
| Nokia | 37 | R1-2110386 | R15/16CDRX | 8 | 4 | 4 | 0 | H | 6 | 6 | 61.00% | 18.00% |
| Nokia | 38 | R1-2110386 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 6 | 6 | 0.00% | 15.80% |
| Nokia | 39 | R1-2110386 | R15/16CDRX | 10 | 8 | 2 | 0 | H | 6 | 6 | 93.00% | 9.20% |
| Nokia | 40 | R1-2110386 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 6 | 6 | 52.00% | 17.00% |
| Ericsson | 14 | R1-2110144 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 4 | 4 | 90.00% | 0.00% |
| Ericsson | 15 | R1-2110144 | Genie | 0 | 0 | 0 | 0 | H | 4 | 4 | 90.00% | 41.00% |
| Ericsson | 16 | R1-2110144 | R15/16CDRX | 10 | 8 | 3 | 0 | H | 4 | 4 | 84.00% | 4.00% |
| Ericsson | 17 | R1-2110144 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 4 | 4 | 29.00% | 8.00% |
| QC | 60 | R1-2110216 | ALWAYS ON | 0 | 0 | 0 | 0 | H | 11 | 11 | 97.75% | 0.00% |

**General Observations**

* In FR1, DL only evaluation, DU, VR/AR30 and low load, the R15/16CDRX scheme provides the mean power saving gain of [4.64]% in the range of [3.57 ~ 5.76%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, DU, VR/AR30 and low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [22.65]% with *marginal* loss in DL UE satisfied rate.

Table 25 Source specific data: FR1, DL-only, DU, AR/VR 30Mbps, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| Huawei | 6 | R1-2108736 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 3 | 5 | 98.41% | 0.00% |
| Huawei | 7 | R1-2108736 | R15/16CDRX | 10 | 5 | 4 | 0 | L | 3 | 5 | 78.25% | 15.24% |
| Huawei | 8 | R1-2108736 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 3 | 5 | 97.78% | 5.76% |
| Huawei | 9 | R1-2108736 | R15/16CDRX | 16 | 8 | 8 | 0 | L | 3 | 5 | 0.00% | 11.01% |
| Huawei | 10 | R1-2108736 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 3 | 5 | 97.94% | 3.57% |
| vivo | 33 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 7 | 13 | 100.00% | - |
| vivo | 34 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 7 | 13 | 100.00% | 5.57% |
| vivo | 35 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 7 | 13 | 100.00% | 3.65% |
| vivo | 38 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 7 | 13 | 100.00% | 22.65% |

**General Observations**

* In FR1, DL only evaluation, DU, VR/AR45 and high load, the R15/16CDRX scheme provides the mean power saving gain of [3.66]% in the range of [3.10 ~ 4.69%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, DU, VR/AR45 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [15.69]% in the range of [12.66~18.73]% with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, DU, VR/AR45 and high load, the cross-slot scheduling + MIMO layer adaptation by BWP switching provides the mean power saving gain of [9.33]% with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, DU, VR/AR45 and high load, the cross-slot scheduling + MIMO layer adaptation + PDCCH skipping by BWP switching provides the mean power saving gain of [9.78]% with *marginal* loss in DL UE satisfied rate.

Table 26 Source specific data: FR1, DL-only, DU, AR/VR 45Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| ZTE, Sanechips | 40 | R1-2108889 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 7 | 7 | 96.60% | 0.00% |
| vivo | 54 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 6 | 6 | 95.63% | - |
| vivo | 55 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 6 | 6 | 93.12% | 4.69% |
| vivo | 56 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 6 | 6 | 94.18% | 3.10% |
| vivo | 59 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 6 | 6 | 94.44% | 18.73% |
| vivo | 60 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | H | 6 | 6 | 95.63% | 37.26% |
| MTK | 6 | R1-2109555 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 7 | 7 | 91.75% | 0% - baseline |
| MTK | 7 | R1-2109555 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 7 | 7 | 68.01% | 5.73% |
| MTK | 10 | R1-2109555 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 7 | 7 | 90.00% | 12.66% |
| Nokia | 41 | R1-2110386 | R15/16CDRX | 4 | 2 | 2 | 0 | H | 4 | 4 | 69.00% | 14.50% |
| Nokia | 42 | R1-2110386 | R15/16CDRX | 8 | 4 | 4 | 0 | H | 4 | 4 | 40.00% | 10.80% |
| Nokia | 43 | R1-2110386 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 4 | 4 | 0.00% | 7.90% |
| Nokia | 44 | R1-2110386 | R15/16CDRX | 10 | 8 | 2 | 0 | H | 4 | 4 | 88.00% | 3.20% |
| Nokia | 45 | R1-2110386 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 4 | 4 | 24.00% | 9.50% |

**Source Specific Observations**

* In FR1, DL only evaluation, DU, VR/AR30 and low load, the R15/16CDRX scheme provides the mean power saving gain of [4.55]% in the range of [3.53 ~ 5.56%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL onlyevaluation, DU, VR/AR30 and low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [21.95]% with *marginal* loss in DL UE satisfied rate.

Table 27 Source specific data: FR1, DL-only, DU, AR/VR 45Mbps, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 47 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 3 | 6 | 100.00% | 0.00% | 0.00% | - |
| vivo | 48 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 3 | 6 | 100.00% | 0.00% | 0.00% | 5.56% |
| vivo | 49 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 3 | 6 | 100.00% | 0.00% | 0.00% | 3.53% |
| vivo | 52 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 3 | 6 | 100.00% | 0.00% | 0.00% | 21.95% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### CG

**General Observations**

* In FR1, DL only evaluation, DU, CG30 and high load, the R15/16CDRX scheme provides the mean power saving gain of [8.96]% in the range of [3.3 ~ 20.0%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, DU, CG30 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [12.86]% with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, DU, CG30 and high load, the cross-slot scheduling + MIMO layer adaptation by BWP switching provides the mean power saving gain of [8.13]% with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, DU, CG30 and high load, the cross-slot scheduling + MIMO layer adaptation + PDCCH skipping by BWP switching provides the mean power saving gain of [8.53]% with *marginal* loss in DL UE satisfied rate.

Table 28 Source specific data: FR1, DL-only, DU, CG 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| Huawei | 11 | R1-2108736 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 7 | 7 | 90.88% | 0.00% |
| Huawei | 12 | R1-2108736 | R15/16CDRX | 10 | 5 | 4 | 0 | H | 7 | 7 | 77.96% | 13.83% |
| Huawei | 13 | R1-2108736 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 7 | 7 | 90.00% | 5.26% |
| Huawei | 14 | R1-2108736 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 7 | 7 | 74.42% | 9.71% |
| Huawei | 15 | R1-2108736 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 7 | 7 | 89.96% | 3.30% |
| MTK | 1 | R1-2109555 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 13 | 13 | 91.48% | 0% - baseline |
| MTK | 2 | R1-2109555 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 13 | 13 | 80.00% | 5.63% |
| MTK | 3 | R1-2109555 | Custom : cross-slot + MIMO layer adaptation by BWP switching | 0 | 0 | 0 | 0 | H | 13 | 13 | 90.74% | 8.13% |
| MTK | 4 | R1-2109555 | Custom : cross-slot + MIMO layer adaptation +PDCCH skipping by BWP switching | 0 | 0 | 0 | 0 | H | 13 | 13 | 90.04% | 8.53% |
| MTK | 5 | R1-2109555 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 13 | 13 | 90.29% | 12.86% |
| Nokia | 31 | R1-2110386 | R15/16CDRX | 4 | 2 | 2 | 0 | H | 8 | 8 | 88.00% | 20.00% |
| Nokia | 32 | R1-2110386 | R15/16CDRX | 8 | 4 | 4 | 0 | H | 8 | 8 | 84.00% | 16.70% |
| Nokia | 33 | R1-2110386 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 8 | 8 | 70.00% | 13.60% |
| Nokia | 34 | R1-2110386 | R15/16CDRX | 10 | 8 | 2 | 0 | H | 8 | 8 | 93.00% | 8.80% |
| Nokia | 35 | R1-2110386 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 8 | 8 | 76.00% | 15.40% |
| Ericsson | 5 | R1-2110144 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 4 | 4 | 90.00% | 0.00% |
| Ericsson | 6 | R1-2110144 | Genie | 0 | 0 | 0 | 0 | H | 4 | 4 | 90.00% | 41.00% |
| Ericsson | 7 | R1-2110144 | R15/16CDRX | 10 | 8 | 3 | 0 | H | 4 | 4 | 89.00% | 4.00% |
| Ericsson | 8 | R1-2110144 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 4 | 4 | 83.00% | 8.00% |

**Source Specific Observations**

* In FR1, DL only evaluation, DU, CG30 and low load, the R15/16CDRX scheme provides the mean power saving gain of [8.83]% in the range of [3.57 ~ 15.2%] with *marginal* loss in DL UE satisfied rate

Table 29 Source specific data: FR1, DL-only, DU, CG 30Mbps, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| Huawei | 16 | R1-2108736 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 3 | 7 | 99.68% | 0.00% |
| Huawei | 17 | R1-2108736 | R15/16CDRX | 10 | 5 | 4 | 0 | L | 3 | 7 | 99.21% | 15.20% |
| Huawei | 18 | R1-2108736 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 3 | 7 | 99.64% | 5.75% |
| Huawei | 19 | R1-2108736 | R15/16CDRX | 16 | 8 | 8 | 0 | L | 3 | 7 | 97.62% | 10.79% |
| Huawei | 20 | R1-2108736 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 3 | 7 | 99.64% | 3.57% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

#### InH

Table 30 Summary of FR1, DL-only power evaluation results for InH

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | System Load | PS gain (%), Note 1 | | Source |
| Mean (%) | Range (%) |
| InH | VR/AR | 30 | R15/16 CDRX | High | [9.29] | [2.39 ~ 20.90] | Vivo, CATT, Nokia |
| Low | [4.7] | [3.67 ~ 5.72] |  |
| R17 PDCCH skipping | High | [20.73] |  | vivo |
| Low | [23.33] |  |  |
| CG | 30 | R15/16 CDRX | High | [16.38] | [9.3 ~ 20.9] | Nokia |
| Low |  |  |  |
| Note 1 : PSG was computed for the cases only with marginal loss in % of DL satisfied UE. | | | | | | |  |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
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|  |  |
|  |  |

##### VR/AR

**General Observations**

* In FR1, DL only evaluation, InH, VR/AR30 and high load, the R15/16CDRX scheme provides the mean power saving gain of [9.29]% in the range of [2.39 ~ 20.90%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, InH, VR/AR30 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [20.73]% with *marginal* loss in DL UE satisfied rate.

Table 31 Source specific data: FR1, DL-only, InH, VR/AR 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| ZTE, Sanechips | 27 | R1-2108889 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 11 | 11 | 93.18% | 0.00% |
| ZTE, Sanechips | 32 | R1-2108889 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 11 | 11 | 93.20% | 0.00% |
| vivo | 9 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 10 | 10 | 92.50% | - |
| vivo | 10 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 10 | 10 | 91.25% | 4.88% |
| vivo | 11 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 10 | 10 | 91.81% | 3.24% |
| vivo | 15 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 10 | 10 | 92.17% | 20.73% |
| CATT | 1 | R1-2109200 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 12 | 12 | 95.83% | 0.00% |
| CATT | 2 | R1-2109200 | R15/16CDRX | 16 | 12 | 4 | 0 | H | 12 | 12 | 90.97% | 2.39% |
| CATT | 3 | R1-2109200 | R15/16CDRX | 6 | 4 | 2 | 0 | H | 12 | 12 | 88.89% | 6.14% |
| Nokia | 6 | R1-2110386 | R15/16CDRX | 4 | 2 | 2 | 0 | H | 5 | 5 | 90.00% | 20.90% |
| Nokia | 7 | R1-2110386 | R15/16CDRX | 8 | 4 | 4 | 0 | H | 5 | 5 | 83.00% | 18.20% |
| Nokia | 8 | R1-2110386 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 5 | 5 | 0.00% | 16.20% |
| Nokia | 9 | R1-2110386 | R15/16CDRX | 10 | 8 | 2 | 0 | H | 5 | 5 | 93.00% | 9.30% |
| Nokia | 10 | R1-2110386 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 5 | 5 | 74.00% | 17.30% |

**General Observations**

* In FR1, DL only evaluation, InH, VR/AR30 and low load, the R15/16CDRX scheme provides the mean power saving gain of [4.7]% in the range of [3.67 ~ 5.72%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, InH, VR/AR30 and low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [23.33]% with *marginal* loss in DL UE satisfied rate.

Table 32 Source specific data: FR1, DL-only, InH, VR/AR 30Mbps, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| ZTE, Sanechips | 28 | R1-2108889 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 10 | 11 | 93.00% | 0.00% |
| ZTE, Sanechips | 33 | R1-2108889 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 10 | 11 | 93.30% | 0.00% |
| vivo | 1 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 5 | 10 | 100.00% | - |
| vivo | 2 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 5 | 10 | 100.00% | 5.72% |
| vivo | 3 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 5 | 10 | 100.00% | 3.67% |
| vivo | 7 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 5 | 10 | 100.00% | 23.33% |

No results available for FR1, DL-only, InH, VR/AR, 45Mbps

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### CG

**General Observations**

* In FR1, DL only evaluation, InH, CG30 and high load, the R15/16CDRX scheme provides the mean power saving gain of [16.38]% in the range of [9.3 ~ 20.90%] with *marginal* loss in DL UE satisfied rate.

Table 33 Source specific data: FR1, DL-only, InH, CG 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| ZTE, Sanechips | 38 | R1-2108889 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 12 | 12 | 96.53% | 0.00% |
| Nokia | 1 | R1-2110386 | R15/16CDRX | 4 | 2 | 2 | 0 | H | 5 | 5 | 96.80% | 20.90% |
| Nokia | 2 | R1-2110386 | R15/16CDRX | 8 | 4 | 4 | 0 | H | 5 | 5 | 96.70% | 18.20% |
| Nokia | 3 | R1-2110386 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 5 | 5 | 95.00% | 16.20% |
| Nokia | 4 | R1-2110386 | R15/16CDRX | 10 | 8 | 2 | 0 | H | 5 | 5 | 98.50% | 9.30% |
| Nokia | 5 | R1-2110386 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 5 | 5 | 96.30% | 17.30% |

No input for FR1, DL-only, CG30, low load case

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

#### UMa

Table 34 Summary of FR1, DL-only power evaluation results for UMa

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | System Load | PS gain (%), Note 1 | | Source |
| Mean (%) | Range (%) |
| UMa | VR/AR | 30 | R15/16 CDRX | High | [4.13] | [3.23 ~ 5.02] |  |
| Low | [5.16] | [4.05 ~ 6.26] |  |
| R17 PDCCH skipping | High | [20.54] |  |  |
| Low | [25.15] |  |  |
| 45 | R15/16 CDRX | High | [4.03] | [3.13 ~ 4.92] |  |
| Low | [4.89] | [3.97 ~ 5.81] |  |
| R17 PDCCH skipping | High | [20.17] |  |  |
| Low | [23.25] |  |  |
| Note 1 : PSG was computed for the cases only with marginal loss in % of DL satisfied UE. | | | | | | |  |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### VR/AR

**Source Specific Observations**

* In FR1, DL only evaluation, UMa, VR/AR30 and high load, the R15/16CDRX scheme provides the mean power saving gain of [4.13]% in the range of [3.23 ~ 5.02%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, UMa, VR/AR30 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [20.54]% with *marginal* loss in DL UE satisfied rate.

Table 35 Source specific data: FR1, DL-only, UMa, VR/AR, 30Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 68 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 8 | 8 | 93.75% | - |
| vivo | 69 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 8 | 8 | 91.47% | 5.02% |
| vivo | 70 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 8 | 8 | 92.85% | 3.23% |
| vivo | 73 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 8 | 8 | 93.75% | 20.54% |

**Source Specific Observations**

* In FR1, DL only evaluation, UMa, VR/AR30 and low load, the R15/16CDRX scheme provides the mean power saving gain of [5.16]% in the range of [4.05 ~ 6.26%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, UMa, VR/AR30 and low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [25.15]% with *marginal* loss in DL UE satisfied rate.

Table 36 Source specific data: FR1, DL-only, UMa, VR/AR, 30Mbps, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 61 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 4 | 8 | 98.81% | - |
| vivo | 62 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 4 | 8 | 98.41% | 6.26% |
| vivo | 63 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 4 | 8 | 98.81% | 4.05% |
| vivo | 66 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 4 | 8 | 98.81% | 25.15% |

**Source Specific Observations**

* In FR1, DL only evaluation, UMa, VR/AR45 and high load, the R15/16CDRX scheme provides the mean power saving gain of [4.03]% in the range of [3.13 ~ 4.92%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, UMa, VR/AR45 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [20.17]% with *marginal* loss in DL UE satisfied rate.

Table 37 Source specific data: FR1, DL-only, UMa, VR/AR, 45Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 82 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 4 | 4 | 94.05% | - |
| vivo | 83 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 4 | 4 | 92.46% | 4.92% |
| vivo | 84 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 4 | 4 | 93.25% | 3.13% |
| vivo | 87 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 4 | 4 | 93.33% | 20.17% |

**Source Specific Observations**

* In FR1, DL only evaluation, UMa, VR/AR45 and low load, the R15/16CDRX scheme provides the mean power saving gain of [4.89]% in the range of [3.97 ~ 5.81%] with *marginal* loss in DL UE satisfied rate.
* In FR1, DL only evaluation, UMa, VR/AR45 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [23.25]s% with *marginal* loss in DL UE satisfied rate.

Table 38 Source specific data: FR1, DL-only, UMa, VR/AR, 45Mbps, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 75 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 2 | 4 | 96.83% | - |
| vivo | 76 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 2 | 4 | 96.83% | 5.81% |
| vivo | 77 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 2 | 4 | 96.83% | 3.97% |
| vivo | 80 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 2 | 4 | 96.83% | 23.25% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### CG

No results were submitted

### UL-only Evaluation

#### DU

Table 39 Summary of FR1, UL-only power evaluation results for DU

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | UL Bit rate (Mbps) | PS scheme | System Load | PS gain (%), Note 1 | |
| Mean (%) | Range (%) |
| DU | VR/CG UL Pose | 0.2 | R15/16 CDRX | High | [31.95] | [26.62 ~ 37.27] |
| Low |  |  |
| AR UL 1 stream (scene) | 10 | R15/16 CDRX | High | [9.68] | [5.8 ~ 14.6] |
| Low | [5.62] | [4.26 ~ 6.97] |
| R17 PDCCH skipping | High | [26.76] | [19.36 ~ 34.15] |
| Low |  |  |
| AR UL 2 streams (pose, scene) | 10.2 | R15/16 CDRX with marginal loss in capacity | High | [2.17] | [1.99 ~ 3.43] |
| Low | [2.51] | [1.79 ~ 3.23] |
| R17 PDCCH skipping | High | [23.02] |  |
| Low | [24.16] |  |
| Note 1 : PSG was computed for the cases only with marginal loss in % of UL satisfied UE. | | | | | | |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### VR/CG

**Source Specific Observations**

* In FR1, UL only evaluation, DU, VR/CG UL pose and high load, the R15/16CDRX scheme provides the mean power saving gain of [31.95]% in the range of [26.62 ~ 37.27%] with *marginal* loss in UL UE satisfied rate.

Table 40 Source specific data: FR1, UL-only, DU, VR/CG-Pose only(250Hz), 0.2Mbps

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 150 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 20 | 20 | 99.99% | - |
| vivo | 151 | R1-2109008 | R15/16CDRX | 4 | 2 | 1 | 0 | H | 20 | 20 | 94.84% | 26.62% |
| vivo | 152 | R1-2109008 | R15/16CDRX | 8 | 3 | 1 | 0 | H | 20 | 20 | 93.81% | 37.27% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### AR

**General Observations**

* In FR1, UL only evaluation, DU, AR UL 1 stream and high load, the R15/16CDRX scheme provides the mean power saving gain of [9.68]% in the range of [5.8 ~ 14.60%] with *marginal* loss in UL UE satisfied rate.
* In FR1, UL only evaluation, DU, AR UL 1 stream and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [26.76]% in the range of [19.36 ~ 34.15%] with *marginal* loss in UL UE satisfied rate.

Table 41 Source specific data: FR1, UL-only, DU, AR 1 stream, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 158 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 9 | 9 | 92.95% | - |
| vivo | 159 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 9 | 9 | 91.53% | 6.73% |
| vivo | 160 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 9 | 9 | 91.17% | 4.25% |
| vivo | 162 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 9 | 9 | 91.77% | 34.15% |
| MTK | 24 | R1-2109555 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 6 | 6 | 100.00% | 0% - baseline |
| MTK | 25 | R1-2109555 | Cross slot scheduling | 0 | 0 | 0 | 0 | H | 6 | 6 | 100.00% | 24.33% |
| MTK | 26 | R1-2109555 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 6 | 6 | 100.00% | 19.36% |
| MTK | 27 | R1-2109555 | Custom : R17 PDCCH skipping + cross slot | 0 | 0 | 0 | 0 | H | 6 | 6 | 100.00% | 32.80% |
| Nokia | 46 | R1-2110386 | R15/16CDRX | 4 | 2 | 2 | 0 | H | 4 | 4 | 0.00% | 14.60% |
| Nokia | 47 | R1-2110386 | R15/16CDRX | 8 | 4 | 4 | 0 | H | 4 | 4 | 0.00% | 10.80% |
| Nokia | 48 | R1-2110386 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 4 | 4 | 0.00% | 7.50% |
| Nokia | 49 | R1-2110386 | R15/16CDRX | 10 | 8 | 2 | 0 | H | 4 | 4 | 0.00% | 5.80% |
| Nokia | 50 | R1-2110386 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 4 | 4 | 0.00% | 9.70% |

**Source Specific Observations**

* In FR1, UL only evaluation, DU, AR UL 1 stream and low load, the R15/16CDRX scheme provides the mean power saving gain of [5.62]% in the range of [4.26 ~ 6.97%] with *marginal* loss in UL UE satisfied rate.

Table 42 Source specific data: FR1, UL-only, DU, AR 1 stream, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 153 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 5 | 9 | 97.14% | - |
| vivo | 154 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 5 | 9 | 97.14% | 6.97% |
| vivo | 155 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 5 | 9 | 97.14% | 4.26% |
| vivo | 157 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | L | 5 | 9 | 96.51% | 35.84% |

**Source Specific Observations**

* In FR1, UL only evaluation, DU, AR UL 2 stream and low load, the R15/16CDRX scheme provides the mean power saving gain of [2.17]% in the range of [1.99 ~ 3.43%] with *marginal* loss in UL UE satisfied rate.
* In FR1, UL only evaluation, DU, AR UL 2 stream and low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [23.02]% with *marginal* loss in UL UE satisfied rate.

Table 43 Source specific data: FR1, UL-only, DU, AR 2 streams, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 207 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 7 | 7 | 92.29% | - |
| vivo | 208 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 7 | 7 | 90.70% | 3.43% |
| vivo | 209 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 7 | 7 | 92.06% | 1.99% |
| vivo | 211 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 7 | 7 | 91.16% | 23.02% |

**Source Specific Observations**

* In FR1, UL only evaluation, DU, AR UL 2 stream and low load, the R15/16CDRX scheme provides the mean power saving gain of [2.51]% in the range of [1.79 ~ 3.23%] with *marginal* loss in UL UE satisfied rate.
* In FR1, UL only evaluation, DU, AR UL 2 stream and low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [24.16]% with *marginal* loss in UL UE satisfied rate.

Table 44 Source specific data: FR1, UL-only, DU, AR 2 streams, low load

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load: H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 4 | 7 | 100.00% | - |
| vivo | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 4 | 7 | 100.00% | 3.23% |
| vivo | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 4 | 7 | 100.00% | 1.79% |
| vivo | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | L | 4 | 7 | 100.00% | 24.16% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

#### InH

Table 45 Summary of FR1, UL-only power evaluation results for InH

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | UL Bit rate (Mbps) | PS scheme | System Load | PS gain (%), Note 1 | |
| Mean (%) | Range (%) |
| InH | VR/CG UL Pose | 0.2 | R15/16 CDRX | High | [31.58] | [26.33 ~ 36.83] |
| Low |  |  |
| AR UL 1 stream (scene) | 10 | R15/16 CDRX | High | [6.26] | [4.8 ~ 7.71] |
| Low |  |  |
| R17 PDCCH skipping | High | [28.43] | [17.63 ~ 39.21] |
| Low |  |  |
| R16 cross slot scheduling | High | [23.87] |  |
| Low |  |  |
| R17 PDCCH skipping + R16 cross slot scheduling | High | [31.56] |  |
| Low |  |  |
| AR UL 2 streams (pose, scene) | 10.2 | R15/16 CDRX | High | [3.16] | [2.34 ~ 3.97] |
| Low | [3.6] | [2.38 ~ 4.82] |
| R17 PDCCH skipping | High | [25.63] |  |
| Low | [28.15] |  |
| Note 1 : PSG was computed for the cases only with marginal loss in % of UL satisfied UE. | | | | | | |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### VR/CG

**Source Specific Observations**

* In FR1, UL only evaluation, InH, VR/CG UL pose and high load, the R15/16CDRX scheme provides the mean power saving gain of [31.58]% in the range of [26.33 ~ 36.83%] with *marginal* loss in UL UE satisfied rate.

Table 46 Source specific data: FR1, UL-only, InH, VR/CG Pose (250Hz) only, 0.2Mbps

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 137 | R1-2109008 | AlwaysOn – baseline | 0 | 0 | 0 | 0 | H | 20 | 20 | 100.00% | - |
| vivo | 138 | R1-2109008 | R15/16CDRX | 4 | 2 | 1 | 0 | H | 20 | 20 | 94.31% | 26.33% |
| vivo | 139 | R1-2109008 | R15/16CDRX | 8 | 3 | 1 | 0 | H | 20 | 20 | 93.33% | 36.83% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### AR

**General Observations**

* In FR1, UL only evaluation, InH, AR UL 1 stream and high load, the R15/16CDRX scheme provides the mean power saving gain of [6.26]% in the range of [4.8 ~ 7.71%] with *marginal* loss in UL UE satisfied rate.
* In FR1, UL only evaluation, InH, AR UL 1 stream and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [28.43]% in the range of [17.65 ~ 39.21%] with *marginal* loss in UL UE satisfied rate.
* In FR1, UL only evaluation, InH, AR UL 1 stream and high load, the R16 cross slot scheduling scheme provides the mean power saving gain of [23.87]% with *marginal* loss in UL UE satisfied rate.
* In FR1, UL only evaluation, InH, AR UL 1 stream and high load, the R17 PDCCH skipping + R16 cross slot scheduling scheme provides the mean power saving gain of [31.56]% with *marginal* loss in UL UE satisfied rate.

Table 47 Source specific data: FR1, UL-only, InH, AR UL 1 stream, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 145 | R1-2109008 | AlwaysOn – baseline | 0 | 0 | 0 | 0 | H | 13 | 13 | 93.59% | - |
| vivo | 146 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 13 | 13 | 92.22% | 7.71% |
| vivo | 147 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 13 | 13 | 92.86% | 4.80% |
| vivo | 149 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 13 | 13 | 92.65% | 39.21% |
| MTK | 28 | R1-2109555 | AlwaysOn – baseline | 0 | 0 | 0 | 0 | H | 4 | 4 | 100.00% | 0% - baseline |
| MTK | 29 | R1-2109555 | Cross slot scheduling | 0 | 0 | 0 | 0 | H | 4 | 4 | 100.00% | 23.87% |
| MTK | 30 | R1-2109555 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 4 | 4 | 100.00% | 17.65% |
| MTK | 31 | R1-2109555 | Custom : R17 PDCCH skipping + cross slot | 0 | 0 | 0 | 0 | H | 4 | 4 | 100.00% | 31.56% |

**Source Specific Observations**

* In FR1, UL only evaluation, InH, AR UL 2 streams and high load, the R15/16CDRX scheme provides the mean power saving gain of [3.16]% in the range of [2.34 ~ 3.97%] with *marginal* loss in UL UE satisfied rate.
* In FR1, UL only evaluation, InH, AR UL 2 streams and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [25.63]% with *marginal* loss in UL UE satisfied rate.

Table 48 Source specific data: FR1, UL-only, InH, AR UL 2 stream, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 197 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 12 | 12 | 93.29% | - |
| vivo | 198 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 12 | 12 | 92.13% | 3.97% |
| vivo | 199 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 12 | 12 | 92.59% | 2.34% |
| vivo | 201 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 12 | 12 | 92.36% | 25.63% |

**Source Specific Observations**

* In FR1, UL only evaluation, InH, AR UL 2 streams and low load, the R15/16CDRX scheme provides the mean power saving gain of [3.6]% in the range of [2.38 ~ 4.82%] with *marginal* loss in UL UE satisfied rate.
* In FR1, UL only evaluation, InH, AR UL 2 streams and low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [28.15]% with *marginal* loss in UL UE satisfied rate.

Table 49 Source specific data: FR1, UL-only, InH, AR UL 2 stream, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 192 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 6 | 12 | 100.00% | - |
| vivo | 193 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 6 | 12 | 100.00% | 4.82% |
| vivo | 194 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 6 | 12 | 100.00% | 2.38% |
| vivo | 196 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | L | 6 | 12 | 100.00% | 28.15% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

#### UMa

Table 50 Summary of FR1, UL-only power evaluation results for UMa

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | UL Bit rate (Mbps) | PS scheme | System Load | PS gain (%), Note 1 | |
| Mean (%) | Range (%) |
| UMa | VR/CG UL Pose | 0.2 | R15/16 CDRX | High | [33.52] | [28.1 ~ 38.93] |
| Low |  |  |
| Note 1 : PSG was computed for the cases only with marginal loss in % of UL satisfied UE. | | | | | | |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### VR/CG

**General Observations**

* In FR1, UL only evaluation, UMa, VR/CG Pose only and low load, the R15/16CDRX scheme provides the mean power saving gain of [33.52]% in the range of [28.10 ~ 38.93%] with *marginal* loss in UL UE satisfied rate.

Table 51 Source specific data: FR1, UL-only, UMa, VR/CG Pose only(250Hz), 0.2Mbps, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 163 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 20 | 20 | 97.70% | - |
| vivo | 164 | R1-2109008 | R15/16CDRX | 4 | 2 | 1 | 0 | H | 20 | 20 | 94.37% | 28.10% |
| vivo | 165 | R1-2109008 | R15/16CDRX | 8 | 3 | 1 | 0 | H | 20 | 20 | 92.94% | 38.93% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### AR

No results were submitted.

## FR2

### DL+UL Evaluation

No results submitted.

### DL-only Evaluation

#### DU

Table 52 Summary of FR2, DL-only power evaluation results for DU

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | System Load | PS gain (%), Note 1 | |
| Mean (%) | Range (%) |
| DU | VR/AR | 30 | R15/16 CDRX | High | [7.73] | [5.96 ~ 9.5] |
| Low | [8.28] | [6.4 ~ 10.15] |
| R17 PDCCH skipping | High | [31.24] |  |
| Low | [31.74] |  |
| 45 | R15/16 CDRX | High | [6.64] | [4.98 ~ 8.29] |
| Low | [7.63] | [6.06 ~ 9.2] |
| R17 PDCCH skipping | High | [26.33] |  |
| Low | [28.25] |  |
| Note 1 : PSG was computed for the cases only with marginal loss in % of DL satisfied UE. | | | | | | |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### VR/AR

**General Observations**

* In FR2, DL only evaluation, DU, VR/AR30 and high load, the R15/16CDRX scheme provides the mean power saving gain of [7.73]% in the range of [5.96 ~ 9.5]% with *marginal* loss in DL UE satisfied rate.
* In FR2, DL only evaluation, DU, VR/AR30 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [31.24]% with *marginal* loss in DL UE satisfied rate.

Table 53 Source specific data: FR2, DL-only, DU, VR/AR30, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 119 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 13 | 13 | 95.24% | - |
| vivo | 120 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 13 | 13 | 91.82% | 9.50% |
| vivo | 121 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 13 | 13 | 93.53% | 5.96% |
| vivo | 123 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 13 | 13 | 95.00% | 31.24% |
| QC | 71 | R1-2110216 | ALWAYS ON | None | None | None | 0 | H | 5 | 5 | 95.00% | 0.00% |
| QC | 72 | R1-2110216 | CDRX | 16 | 4 | 4 | 0 | H | 5 | 5 | 0.00% | 27.49% |
| QC | 73 | R1-2110216 | CDRX | 16 | 8 | 8 | 0 | H | 5 | 5 | 35.00% | 8.70% |
| QC | 74 | R1-2110216 | CDRX | 16 | 8 | 16 | 0 | H | 5 | 5 | 51.00% | 3.06% |
| QC | 75 | R1-2110216 | Genie (CDRX with ideal PDCCH Skipping) | 16 | None | none | Genie is the same for all CDRX | H | 0 | 0 | 95.00% | 68.80% |

**Source Specific Observations**

* In FR2, DL only evaluation, DU, VR/AR30 and low load, the R15/16CDRX scheme provides the mean power saving gain of [8.28]% in the range of [6.4 ~ 10.15%] with *marginal* loss in DL UE satisfied rate.
* In FR2, DL only evaluation, DU, VR/AR30 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [31.74]% with *marginal* loss in DL UE satisfied rate.

Table 54 Source specific data: FR2, DL-only, DU, VR/AR30, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 113 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 7 | 13 | 99.55% | - |
| vivo | 114 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 7 | 13 | 98.64% | 10.15% |
| vivo | 115 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 7 | 13 | 99.32% | 6.40% |
| vivo | 117 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 7 | 13 | 99.32% | 31.74% |

**Source Specific Observations**

* In FR2, DL only evaluation, DU, VR/AR45 and high load, the R15/16CDRX scheme provides the mean power saving gain of [6.64]% in the range of [4.98 ~ 8.29%] with *marginal* loss in DL UE satisfied rate.
* In FR2, DL only evaluation, DU, VR/AR45 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [26.33]% with *marginal* loss in DL UE satisfied rate.

Table 55 Source specific data: FR2, DL-only, DU, VR45, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 131 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 8 | 8 | 93.25% | - |
| vivo | 132 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 8 | 8 | 91.67% | 8.29% |
| vivo | 133 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 8 | 8 | 32.26% | 4.98% |
| vivo | 135 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 8 | 8 | 93.25% | 26.33% |

**General Observations**

* In FR2, DL only evaluation, DU, VR/AR45 and low load, the R15/16CDRX scheme provides the mean power saving gain of [7.63]% in the range of [6.06 ~ 9.2%] with *marginal* loss in DL UE satisfied rate.
* In FR2, DL only evaluation, DU, VR/AR45 and low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [28.25]% with *marginal* loss in DL UE satisfied rate.

Table 56 Source specific data: FR2, DL-only, DU, VR45, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 125 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 4 | 8 | 100.00% | - |
| vivo | 126 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 4 | 8 | 100.00% | 9.20% |
| vivo | 127 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 4 | 8 | 100.00% | 6.06% |
| vivo | 129 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 4 | 8 | 100.00% | 28.25% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### CG

No results available

#### InH

Table 57 Summary of FR2, DL-only power evaluation results for InH

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | System Load | PS gain (%), Note 1 | |
| Mean (%) | Range (%) |
| InH | VR/AR | 30 | R15/16 CDRX | High | [10.78] | [5.81 ~ 19.58] |
| Low | [8.17] | [6.28 ~ 10.06] |
| R17 PDCCH skipping | High | [32.69] |  |
| Low | [33.80] |  |
| 45 | R15/16 CDRX | High | [11.50] | [5.73 ~ 18.00] |
| Low | [7.75] |  |
| R17 PDCCH skipping | High | [28.58] | [27.36 ~ 29.8] |
| Low | [28.87] |  |
| R16 cross slot scheduling | High | [12.20] |  |
| R17 PDCCH skipping + cross slot scheduling | High | [30] |  |
| CG | 30 | R15/16 CDRX | High | [13.80] | [7.6 ~ 18.50] |
| Low |  |  |
| Note 1 : PSG was computed for the cases only with marginal loss in % of DL satisfied UE. | | | | | | |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### VR/AR

**General Observations**

* In FR2, DL only evaluation, InH, VR/AR30 and high load, the R15/16CDRX scheme provides the mean power saving gain of [10.78]% in the range of [5.81 ~ 19.58%] with *marginal* loss in DL UE satisfied rate.
* In FR2, DL only evaluation, DU, VR/AR30 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [32.69]% with *marginal* loss in DL UE satisfied rate.

Table 58 Source specific data: FR2, DL-only, InH, VR30, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 95 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 8 | 8 | 92.01% | - |
| vivo | 96 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 8 | 8 | 90.63% | 9.53% |
| vivo | 97 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 8 | 8 | 91.37% | 5.81% |
| vivo | 99 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 8 | 8 | 92.01% | 32.69% |
| vivo | 100 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | H | 8 | 8 | 92.01% | 57.53% |
| Nokia | 21 | R1-2110386 | R15/16CDRX | 4 | 2 | 2 | 0 | H | 10 | 10 | 85.58% | 19.58% |
| Nokia | 22 | R1-2110386 | R15/16CDRX | 8 | 4 | 4 | 0 | H | 10 | 10 | 20.66% | 16.41% |
| Nokia | 23 | R1-2110386 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 10 | 10 | 0.00% | 13.16% |
| Nokia | 24 | R1-2110386 | R15/16CDRX | 10 | 8 | 2 | 0 | H | 10 | 10 | 92.41% | 8.21% |
| Nokia | 25 | R1-2110386 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 10 | 10 | 7.16% | 14.92% |
| QC | 66 | R1-2110216 | ALWAYS ON | None | None | None | 0 | H | 5 | 5 | 100.00% | 0.00% |
| QC | 67 | R1-2110216 | CDRX | 16 | 4 | 4 | 0 | H | 5 | 5 | 0.00% | 21.99% |
| QC | 68 | R1-2110216 | CDRX | 16 | 8 | 8 | 0 | H | 5 | 5 | 40.00% | 9.20% |
| QC | 69 | R1-2110216 | CDRX | 16 | 8 | 16 | 0 | H | 5 | 5 | 60.00% | 1.47% |
| QC | 70 | R1-2110216 | Genie (CDRX with ideal PDCCH Skipping) | 16 | None | noe | Genie is the same for all CDRX | H | 5 | 5 | 100.00% | 70.40% |
| QC | 76 | R1-2110216 | ALWAYS ON | None | None | None | 0 | H | 5 | 5 | 100.00% | 0.00% |
| QC | 80 | R1-2110216 | ALWAYS ON | None | None | None | 0 | H | 5 | 5 | 100.00% | 0.00% |

**Source Specific Observations**

* In FR2, DL only evaluation, InH, VR/AR30 and low load, the R15/16CDRX scheme provides the mean power saving gain of [8.17]% in the range of [6.28 ~ 10.06]% with *marginal* loss in DL UE satisfied rate.
* In FR2, DL only evaluation, DU, VR/AR30 and low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [33.80]% with *marginal* loss in DL UE satisfied rate.

Table 59 Source specific data: FR2, DL-only, InH, VR30, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 89 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 4 | 8 | 100.00% | - |
| vivo | 90 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 4 | 8 | 99.31% | 10.06% |
| vivo | 91 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 4 | 8 | 99.31% | 6.28% |
| vivo | 93 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 4 | 8 | 100.00% | 33.80% |

**General Observations**

* In FR2, DL only evaluation, InH, VR/AR45 and high load, the R15/16CDRX scheme provides the mean power saving gain of [11.50]% in the range of [5.73 ~ 18.00%] with *marginal* loss in DL UE satisfied rate.
* In FR2, DL only evaluation, InH, VR/AR45 and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [28.58]% in the range of [27.36 ~ 29.8%] with *marginal* loss in DL UE satisfied rate.
* In FR2, DL only evaluation, InH, VR/AR45 and high load, the R16 cross slot scheduling scheme provides the mean power saving gain of [12.20]% with *marginal* loss in DL UE satisfied rate.
* In FR2, DL only evaluation, InH, VR/AR45 and high load, the R17 PDCCH skipping + cross slot scheduling scheme provides the mean power saving gain of [30.0]% with *marginal* loss in DL UE satisfied rate.

Table 60 Source specific data: FR2, DL-only, InH, VR45, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 107 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 4 | 4 | 94.44% | - |
| vivo | 108 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 4 | 4 | 91.67% | 9.15% |
| vivo | 109 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 4 | 4 | 93.75% | 5.73% |
| vivo | 111 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | H | 4 | 4 | 93.75% | 27.36% |
| Nokia | 26 | R1-2110386 | R15/16CDRX | 4 | 2 | 2 | 0 | H | 6 | 6 | 75.56% | 18.00% |
| Nokia | 27 | R1-2110386 | R15/16CDRX | 8 | 4 | 4 | 0 | H | 6 | 6 | 9.40% | 15.00% |
| Nokia | 28 | R1-2110386 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 6 | 6 | 0.00% | 11.60% |
| Nokia | 29 | R1-2110386 | R15/16CDRX | 10 | 8 | 2 | 0 | H | 6 | 6 | 90.00% | 7.50% |
| Nokia | 30 | R1-2110386 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 6 | 6 | 3.33% | 13.50% |
| QC | 1 | R1-2107376 | ALWAYS ON | Null | 0 | 0 | 0 | H | 3 | 3 | 90.00% | 0.00% |
| QC | 2 | R1-2107376 | Cross-slot scheduling | Null | 0 | 0 | 0 | H | 3 | 3 | 90.00% | 12.20% |
| QC | 3 | R1-2107376 | PDCCH Skipping | Null | 0 | 0 | 0 | H | 3 | 3 | 90.00% | 29.80% |
| QC | 4 | R1-2107376 | PDCCH Skipping + Cross-slot skipping | Null | 0 | 0 | 0 | H | 3 | 3 | 90.00% | 30.00% |

**General Observations**

* In FR2, DL only evaluation, InH, VR/AR45 and low load, the R15/16CDRX scheme provides the mean power saving gain of [7.75]% in the range of [5.98 ~ 9.52%] with *marginal* loss in DL UE satisfied rate.
* In FR2, DL only evaluation, InH, VR/AR45 and low load, the R17 PDCCH skipping scheme provides the mean power saving gain of [28.87]% with *marginal* loss in DL UE satisfied rate.

Table 61 Source specific data: FR2, DL-only, InH, VR45, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 101 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 2 | 4 | 100.00% | - |
| vivo | 102 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 2 | 4 | 98.61% | 9.52% |
| vivo | 103 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 2 | 4 | 98.61% | 5.98% |
| vivo | 105 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | without jitter handling | L | 2 | 4 | 98.61% | 28.87% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### CG

**General Observations**

* In FR2, DL only evaluation, InH, CG30 and high load, the R15/16CDRX scheme provides the mean power saving gain of [13.80]% in the range of [7.6 ~ 18.50%] with *marginal* loss in DL UE satisfied rate.

Table 62 Source specific data: FR2, DL-only, InH, CG30, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| Nokia | 16 | R1-2110386 | R15/16CDRX | 4 | 2 | 2 | 0 | H | 11 | 11 | 98.33% | 18.50% |
| Nokia | 17 | R1-2110386 | R15/16CDRX | 8 | 4 | 4 | 0 | H | 11 | 11 | 98.00% | 15.40% |
| Nokia | 18 | R1-2110386 | R15/16CDRX | 16 | 8 | 8 | 0 | H | 11 | 11 | 78.10% | 11.60% |
| Nokia | 19 | R1-2110386 | R15/16CDRX | 10 | 8 | 2 | 0 | H | 11 | 11 | 98.20% | 7.60% |
| Nokia | 20 | R1-2110386 | R15/16CDRX | 10 | 5 | 5 | 0 | H | 11 | 11 | 96.00% | 13.70% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

### UL-only Evaluation

#### DU

Table 63 Summary of FR2, UL-only, power evaluation results for DU

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | UL Bit rate (Mbps) | PS scheme | System Load | PS gain (%), Note 1 | |
| Mean (%) | Range (%) |
| DU | VR/CG UL Pose | 0.2 | R15/16 CDRX | High | [40.53] | [35.99 ~ 45.07] |
| AR UL 1 stream (scene) | 10 | R15/16 CDRX | High | [7.68] | [6.18 ~ 9.18] |
| Low | [7.89] | [6.41 ~ 9.36] |
| R17 PDCCH skipping | High | [48.82] | [46.21 ~ 51.42] |
| Low |  |  |
| Note 1 : PSG was computed for the cases only with marginal loss in % of UL satisfied UE. | | | | | | |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### VR/CG

**General Observations**

* In FR2, UL only evaluation, DU, VR/CG pose only and high load, the R15/16CDRX scheme provides the mean power saving gain of [40.53]% in the range of [35.99 ~ 45.07%] with *marginal* loss in UL UE satisfied rate.

Table 64 Source specific data: FR2, UL-only, DU, VR/CG Pose only, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 166 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 20 | 20 | 97.69% | - |
| vivo | 167 | R1-2109008 | R15/16CDRX | 4 | 2 | 1 | 0 | H | 20 | 20 | 95.90% | 35.99% |
| vivo | 168 | R1-2109008 | R15/16CDRX | 8 | 3 | 1 | 0 | H | 20 | 20 | 92.82% | 45.07% |

No results available for FR2, UL-only, DU, VR/CG Pose only, low load

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### AR

**General Observations**

* In FR2, UL only evaluation, DU, AR UL 1 stream, and high load, the R15/16CDRX scheme provides the mean power saving gain of [7.68]% in the range of [6.18 ~ 9.18%] with *marginal* loss in UL UE satisfied rate.
* In FR2, UL only evaluation, DU, AR UL 1 stream and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [48.82]% in the range of [46.21 ~ 51.42%] with *marginal* loss in UL UE satisfied rate.

Table 65 Source specific data: FR2, UL-only, DU, AR 1 stream, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 186 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 8 | 8 | 100.00% | 51.43% |
| vivo | 187 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 8 | 8 | 92.66% | - |
| vivo | 188 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 8 | 8 | 91.07% | 9.18% |
| vivo | 189 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 8 | 8 | 91.67% | 6.18% |
| vivo | 191 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 8 | 8 | 91.27% | 46.21% |

**General Observations**

* In FR2, UL only evaluation, DU, AR UL 1 stream, and low load, the R15/16CDRX scheme provides the mean power saving gain of [7.89]% in the range of [6.41 ~ 9.36%] with *marginal* loss in UL UE satisfied rate.

Table 66 Source specific data: FR2, UL-only, DU, AR 1 stream, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 182 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 4 | 8 | 100.00% | - |
| vivo | 183 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 4 | 8 | 99.60% | 9.36% |
| vivo | 184 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 4 | 8 | 100.00% | 6.41% |

No results available for FR2, UL-only, DU, AR 2 streams.

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

#### InH

Table 67 Summary of FR2, UL-only power evaluation results for InH

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | UL Bit rate (Mbps) | PS scheme | System Load | PS gain (%), Note 1 | |
| Mean (%) | Range (%) |
| InH | VR/CG UL Pose | 0.2 | R15/16 CDRX | High | [40.53] | [35.99 ~ 45.07] |
| AR UL 1 stream (scene) | 10 | R15/16 CDRX | High | [8.16] | [6.58 ~ 9.74] |
| Low | [8.6] | [6.96 ~ 10.24] |
| R17 PDCCH skipping | High | [51.84] | [51.32 ~ 52.35] |
| Low |  |  |
| Note 1 : PSG was computed for the cases only with marginal loss in % of UL satisfied UE. | | | | | | |

1. **Please provide your comment on the above summary table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### VR/CG

**General Observations**

* In FR2, UL only evaluation, DU, VR/CG pose only, and high load, the R15/16CDRX scheme provides the mean power saving gain of [40.53]% in the range of [35.99 ~ 45.07%] with *marginal* loss in UL UE satisfied rate.

Table 68 Source specific data: FR2, UL-only, DU, VR/CG Pose only, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 166 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 20 | 20 | 97.69% | - |
| vivo | 167 | R1-2109008 | R15/16CDRX | 4 | 2 | 1 | 0 | H | 20 | 20 | 95.90% | 35.99% |
| vivo | 168 | R1-2109008 | R15/16CDRX | 8 | 3 | 1 | 0 | H | 20 | 20 | 92.82% | 45.07% |

No results available for FR2, UL-only, DU, VR/CG Pose only, low load case

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

##### AR

**Source Specific Observations**

* In FR2, UL only evaluation, DU, AR UL 1 stream, and high load, the R15/16CDRX scheme provides the mean power saving gain of [8.16]% in the range of [6.58 ~ 9.74%] with *marginal* loss in UL UE satisfied rate.
* In FR2, UL only evaluation, DU, AR UL 1 stream, and high load, the R17 PDCCH skipping scheme provides the mean power saving gain of [51.84]% in the range of [51.32 ~ 52.35%] with *marginal* loss in UL UE satisfied rate.

Table 69 Source specific data: FR2, UL-only, DU, AR 1 Stream, high load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 173 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 8 | 8 | 100.00% | 52.35% |
| vivo | 174 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 8 | 8 | 95.14% | - |
| vivo | 175 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | H | 8 | 8 | 92.71% | 9.74% |
| vivo | 176 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | H | 8 | 8 | 94.10% | 6.58% |
| vivo | 178 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | 0 | H | 8 | 8 | 93.06% | 51.32% |

**Source Specific Observations**

* In FR2, UL only evaluation, DU, AR UL 1 stream, and low load, the R15/16CDRX scheme provides the mean power saving gain of [8.6]% in the range of [6.96 ~ 10.24%] with *marginal* loss in UL UE satisfied rate.

Table 70 Source specific data: FR2, UL-only, DU, AR 1 Stream, low load

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 169 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | L | 4 | 8 | 100.00% | - |
| vivo | 170 | R1-2109008 | R15/16CDRX | 10 | 8 | 4 | 0 | L | 4 | 8 | 100.00% | 10.24% |
| vivo | 171 | R1-2109008 | R15/16CDRX | 16 | 14 | 4 | 0 | L | 4 | 8 | 100.00% | 6.96% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

## Performance Comparison for Parameters/Modelling

### Trade-off between Capacity and Power

**Source Specific Observations**

* There is trade-off relation between % of satisfied UE (or capacity) and power saving gain, that is high power saving gain can be achieved with the lower % of satisfied UE.

Table 71 Source specific data, FR1, DL, DU, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data point index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| Huawei | 5 | R1-2108736 | R15/16CDRX | 16 | 14 | 4 | H | 5 | 5 | 90.67% | 3.46% |
| Huawei | 13 | R1-2108736 | R15/16CDRX | 10 | 8 | 4 | H | 7 | 7 | 90.00% | 5.26% |
| Huawei | 15 | R1-2108736 | R15/16CDRX | 16 | 14 | 4 | H | 7 | 7 | 89.96% | 3.30% |
| Huawei | 3 | R1-2108736 | R15/16CDRX | 10 | 8 | 4 | H | 5 | 5 | 88.29% | 5.53% |
| Huawei | 12 | R1-2108736 | R15/16CDRX | 10 | 5 | 4 | H | 7 | 7 | 77.96% | 13.83% |
| Huawei | 14 | R1-2108736 | R15/16CDRX | 16 | 8 | 8 | H | 7 | 7 | 74.42% | 9.71% |
| Huawei | 2 | R1-2108736 | R15/16CDRX | 10 | 5 | 4 | H | 5 | 5 | 61.05% | 14.68% |
| Huawei | 4 | R1-2108736 | R15/16CDRX | 16 | 8 | 8 | H | 5 | 5 | 0.00% | 10.70% |

Table 72 Source specific data, FR1, DL+UL, DU, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data point index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| QC | 68 | R1-2108251 | R15/16CDRX | 8 | 6 | 6 | H | 11 | 11 | 92.81% | 99.74% | 92.81% | 5.39% |
| QC | 69 | R1-2108251 | R15/16CDRX | 8 | 4 | 4 | H | 11 | 11 | 75.93% | 50.73% | 39.13% | 15.07% |
| QC | 70 | R1-2108251 | R15/16CDRX | 8 | 2 | 4 | H | 11 | 11 | 59.82% | 72.21% | 45.11% | 19.91% |
| QC | 71 | R1-2108251 | R15/16CDRX | 8 | 2 | 2 | H | 11 | 11 | 12.81% | 0.00% | 0.00% | 31.19% |
| QC | 72 | R1-2108251 | R15/16CDRX | 8 | 4 | 2 | H | 11 | 11 | 25.19% | 0.00% | 0.00% | 25.25% |

### Performance Comparison for different DL frame generation rates

**Source Specific Observations**

* Increasing application frame generation rate increases UE power consumption.
* In FR1, DL+UL evaluation, DU, AlwaysOn, VR 30Mbps with 120fps increases power consumption by [8]% w.r.t. 60fps case.

Table 73 Source specific data: FR1, DL+UL eval, DU, VR 30Mbps for different DL frame generation rates

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data point index | Tdoc source | Power saving scheme | Fps | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| QC | 5 | R1-2110216 | AlwaysOn - baseline | 60 | H | 11 | 11 | 95.33% | 99.74% | 95.33% | 0.00% |
| QC | 59 | R1-2110216 | AlwaysOn - baseline | 120 | H | 11 | 11 | 98.87% | 99.74% | 98.87% | -6.45% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

### Performance Comparison for different data rates

**Source Specific Observations**

* Increasing application data(bit) rate increases UE power consumption.
* In FR1, DL+UL evaluation, DU, AlwaysOn, VR DL bit rate of 45 and 60 Mbps increases power consumption by [2 and 4.2]% w.r.t. VR DL 30Mbps case.

Table 74 Source specific data: FR1, DL+UL, DU, VR 30Mbps for different data rates

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | DL bit rates | Additional Assumptions | Load H/L | N1 | C1 | % of DL+UL satisfied UE | PSG (%) |
| QC | TBD | R1-2110216 | AlwaysOn | 30Mbps |  | L | 1 | 11 | 100% | 0.00% |
| QC | 60 | R1-2110216 | AlwaysOn | 45Mbps |  | L | 1 | 11 | 98.09% | -2.14% |
| QC | 61 | R1-2110216 | AlwaysOn | 60Mbps |  | L | 1 | 11 | 95.71% | -4.21% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
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|  |  |
|  |  |

### Performance Comparison for different pose periodicity

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | UL Bit rate (Mbps) | UL pose periodicity | PS scheme | PS gain (%), Note 1 | | Source |
| Mean (%) | Range (%) |
| DU | VR/CG UL Pose | 0.2 | 4ms | AlwaysOn | [0] |  | QC |
| 0.1 | 8ms | AlwaysOn | [2.27] |  | QC |
| 0.048 | 16.67ms | AlwaysOn | [10.83] |  | QC |

**Source Specific Observations**

* Reducing pose periodicity could decrease power consumption.
* In FR1, DL+UL evaluation, DU, Pose only, AlwaysOn, the pose tx with periodicity of 8ms (or 125Hz) has power saving gain of [2.27]% w.r.t AlwaysOn with periodicity of 4ms.
* In FR1, DL+UL evaluation, DU, Pose only, AlwaysOn, the pose tx with periodicity of 16.67ms (or 60Hz) has power saving gain of [10.83%] w.r.t AlwaysOn with periodicity of 4ms.

Table 75 Source specific data: FR1, DU, DL+UL, VR30, UL pose (periodicity = 4ms)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | Pose Periodicity | Load H/L | N1 | C1 | % of DL+UL satisfied UE | PSG (%) |
| QC | 5 | R1-2110216 | AlwaysOn | 4ms | H | 11 | 11 | 95.49% | 0.00% |
| QC | 64 | R1-2110216 | AlwaysOn | 8ms | H | 11 | 11 | 95.15% | 2.27% |
| QC | 65 | R1-2110216 | AlwaysOn | 16.67ms | H | 11 | 11 | 95.75% | 10.83% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
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|  |  |
|  |  |

## Potential Enhancements

### Performance of enhanced CDRX

#### FR1

##### DL+UL joint evaluation

Table 76 Summary of FR1, DL+UL power evaluation results for eCDRX

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | PS Gain (%), Note 1 | | Source |
| Mean (%) | Range (%) |
| DU | VR | 30 | eCDRX | [13.07] | [4.51 ~ 23.49] | Vivo, Ericsson, QC |
| CG | 30 | eCDRX | [6] |  | Ericsson |
| AR (UL 1/2 streams) | 30 | eCDRX | [15.59] | [13.19 ~ 20.77] | vivo |
| InH | VR | 30 | eCDRX | [22.67] | [21.40 ~ 25.12] | ZTE, vivo |
| CG | 30 | eCDRX | [21.35] | [21.30 ~ 21.40] | ZTE |
| AR (UL 1/2 streams) | 30 | eCDRX | [17.25] | [13.96 ~ 23.61] | vivo |

Add CDRX number for comparison.

1. **Please provide your comment on the above table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

###### DU

**General Observations**

* In FR1, DL+UL only evaluation, DU, VR30, the enhanced CDRX scheme provides the mean power saving gain of [13.07]% in the range of [4.51 ~ 23.49%] with *marginal* loss in DL+UL UE satisfied rate.

Table 77 Source specific data: eCDRX, FR1, DL+UL, DU, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 227 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 7 | 13 | 0.00% | 0.00% | 100.00% | 23.49% |
| vivo | 233 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 13 | 13 | 0.00% | 0.00% | 91.21% | 21.93% |
| Ericsson | 13 | R1-2110144 | eCDRX | 16.6666 | 13 | 0 | 0 | H | 4 | 4 | 0.00% | 0.00% | 85.00% | 6.00% |
| QC | 56 | R1-2110216 | eCDRX | 16/17/17 | 10 | 10 | 0 | H | 11 | 11 | 97.66% | 84.85% | 82.86% | 9.43% |
| QC | 57 | R1-2110216 | eCDRX | 16/17/17 | 12 | 12 | 0 | H | 11 | 11 | 97.58% | 96.62% | 94.20% | 4.51% |

**Source Specific Observations**

* In FR1, DL+UL only evaluation, DU, CG30, the enhanced CDRX scheme provides the mean power saving gain of [6.0]% with *marginal* loss in DL+UL UE satisfied rate.

Table 78 Source specific data: eCDRX, FR1, DL+UL, DU, CG30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load: H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| Ericsson | 4 | R1-2110144 | eCDRX | 16.6666 | 13 | 0 | 0 | H | 4 | 4 | 0.00% | 0.00% | 87.00% | 6.00% |

**Source Specific Observations**

* In FR1, DL+UL only evaluation, DU, AR30, the enhanced CDRX scheme provides the mean power saving gain of [15.59]% in the rage of [13.19 ~ 20.77%] with *marginal* loss in DL+UL UE satisfied rate.

Table 79 Source specific data: eCDRX, FR1, DL+UL, DU, AR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 251 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 5 | 9 | 0.00% | 0.00% | 95.87% | 20.77% |
| vivo | 257 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 9 | 9 | 0.00% | 0.00% | 90.83% | 14.04% |
| vivo | 275 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 4 | 7 | 0.00% | 0.00% | 100.00% | 14.34% |
| vivo | 281 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 7 | 7 | 0.00% | 0.00% | 90.48% | 13.19% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

###### InH

**General Observations**

* In FR1, DL+UL only evaluation, InH, VR30, the enhanced CDRX scheme provides the mean power saving gain of [22.67]% in the range of [21.40 ~ 25.12%] with *marginal* loss in DL+UL UE satisfied rate.

Table 80 Source specific data: eCDRX, FR1, DL+UL, InH, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| ZTE, Sanechips | 5 | R1-2108889 | eCDRX | 16 | 6 | 3 | Note 1  Note 2 | H | 11 | 11 | 83.00% | 100.00% | 0.00% | 22.60% |
| ZTE, Sanechips | 6 | R1-2108889 | eCDRX | 16 | 6 | 3 | Note 1  Note 2 | H | 11 | 11 | 83.00% | 100.00% | 0.00% | 22.60% |
| ZTE, Sanechips | 7 | R1-2108889 | eCDRX | 16 | 6 | 3 | Note 1  Note 2 | L | 10 | 11 | 85.83% | 100.00% | 0.00% | 21.50% |
| ZTE, Sanechips | 8 | R1-2108889 | eCDRX | 16 | 6 | 3 | Note 1  Note 2 | L | 10 | 11 | 85.83% | 100.00% | 0.00% | 21.40% |
| ZTE, Sanechips | 9 | R1-2108889 | eCDRX | 16 | 6 | 4 | Note 1  Note 2 | H | 11 | 11 | 87.12% | 100.00% | 0.00% | 21.70% |
| ZTE, Sanechips | 10 | R1-2108889 | eCDRX | 16 | 6 | 4 | Note 1  Note 2 | H | 11 | 11 | 87.12% | 100.00% | 0.00% | 21.60% |
| ZTE, Sanechips | 15 | R1-2108889 | eCDRX | 16 | 6 | 3 | Note 1  Note 2 | H | 11 | 11 | 85.60% | 100.00% | 0.00% | 23.60% |
| ZTE, Sanechips | 16 | R1-2108889 | eCDRX | 16 | 6 | 3 | Note 1  Note 2 | H | 11 | 11 | 85.60% | 100.00% | 0.00% | 23.60% |
| ZTE, Sanechips | 17 | R1-2108889 | eCDRX | 16 | 6 | 3 | Note 1  Note 2 | L | 10 | 11 | 90.30% | 100.00% | 0.00% | 22.40% |
| ZTE, Sanechips | 18 | R1-2108889 | eCDRX | 16 | 6 | 3 | Note 1  Note 2 | L | 10 | 11 | 90.30% | 100.00% | 0.00% | 22.40% |
| vivo | 215 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 25.12% |
| vivo | 221 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 10 | 10 | 0.00% | 0.00% | 90.70% | 23.56% |
| Note 1. DL and UL were simulated separately and collected traces are combined as a single timeline for DL+UL joint power evaluation.  Note 2. drx-startoffset change additional active time | | | | | | | | | | | | | | |

**Source Specific Observations**

* In FR1, DL+UL only evaluation, DU, CG30, the enhanced CDRX scheme provides the mean power saving gain of [21.35]% in the range of [21.30 ~ 21.40%] with *marginal* loss in DL+UL UE satisfied rate.

Table 81 Source specific data: eCDRX, FR1, DL+UL, InH, CG30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| ZTE, Sanechips | 25  Note 1 | R1-2108889 | eCDRX | 16 | 6 | 3 | drx-startoffset change additional active time | H | 12 | 12 | 88.19% | 100.00% | 0.00% | 21.40% |
| ZTE, Sanechips | 26  Note 1 | R1-2108889 | eCDRX | 16 | 6 | 3 | drx-startoffset change additional active time | H | 12 | 12 | 88.19% | *100.00%* | 0.00% | 21.30% |
| Note 1. DL and UL were simulated separately and merged for DL+UL joint power evaluation. | | | | | | | | | | | | | | |

**Source Specific Observations**

* In FR1, DL+UL only evaluation, DU, AR30, the enhanced CDRX scheme provides the mean power saving gain of [17.25]% in the range of [13.96 ~ 23.61%] with *marginal* loss in DL+UL UE satisfied rate.

Table 82 Source specific data: eCDRX, FR1, DL+UL, InH, AR30 (1 & 2 streams)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 239 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 23.61% |
| vivo | 245 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 10 | 10 | 0.00% | 0.00% | 90.83% | 14.77% |
| vivo | 263 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 5 | 10 | 0.00% | 0.00% | 100.00% | 16.65% |
| vivo | 269 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 10 | 10 | 0.00% | 0.00% | 90.56% | 13.96% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

###### UMa

No results available for UMa

##### DL-only Evaluation

Table 83 Summary of FR1, DL-only power evaluation results for eCDRX

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | PS Gain (%), Note 1 | |
| Mean (%) | Range (%) |
| DU | VR | 30 | eCDRX | [19.42] | [6.66 ~ 34.95] |
| 45 | eCDRX | [20.49] | [9.72 ~ 29.90] |
| InH | VR | 30 | eCDRX | [27.31] | [9.36 ~ 35.35] |
| 45 | eCDRX | [23.52] | [9.42 ~ 35.09] |
| UMa | VR | 30 | eCDRX | [18.88] | [10.05 ~ 29.06] |
| 45 | eCDRX | [18.22] | [9.86 ~ 27.33] |

1. **Please provide your comment on the above table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

###### DU

**General Observations**

* In FR1, DL+UL only evaluation, DU, VR30, the enhanced CDRX scheme provides the mean power saving gain of [19.42]% in the range of [6.66 ~ 34.95%] with *marginal* loss in DL+UL UE satisfied rate.

Table 84 Source specific data: eCDRX, FR1, DL-only, DU, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 36 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | L | 7 | 13 | 100.00% | 12.49% |
| vivo | 37 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 7 | 13 | 100.00% | 27.49% |
| vivo | 43 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | H | 13 | 13 | 91.70% | 8.67% |
| vivo | 44 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 13 | 13 | 91.21% | 21.72% |
| Ericsson | 18 | R1-2110144 | eCDRX | 16.6666 | 8 | 3 | 0 | H | 4 | 4 | 84.00% | 22.00% |
| QC | 61 | R1-2110216 | eCDRX | 16/17/17 | 4 | 6 | 0 | H | 11 | 11 | 95.76% | 34.95% |
| QC | 62 | R1-2110216 | eCDRX | 16/17/17 | 6 | 6 | 0 | H | 11 | 11 | 96.45% | 28.01% |
| QC | 63 | R1-2110216 | eCDRX | 16/17/17 | 8 | 8 | 0 | H | 11 | 11 | 96.79% | 19.98% |
| QC | 64 | R1-2110216 | eCDRX | 16/17/17 | 10 | 10 | 0 | H | 11 | 11 | 96.19% | 12.19% |
| QC | 65 | R1-2110216 | eCDRX | 16/17/17 | 12 | 12 | 0 | H | 11 | 11 | 96.80% | 6.66% |

**General Observations**

* In FR1, DL+UL only evaluation, DU, VR45, the enhanced CDRX scheme provides the mean power saving gain of [20.49]% in the range of [9.72 ~ 29.90%] with *marginal* loss in DL+UL UE satisfied rate.

Table 85 Source specific data: eCDRX, FR1, DL-only, DU, VR45

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| ZTE, Sanechips | 41 | R1-2108889 | eCDRX | 16 | 6 | 4 | drx-startoffset change additional active time | H | 7 | 7 | 90.00% | 29.90% |
| vivo | 50 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | L | 3 | 6 | 98.94% | 12.61% |
| vivo | 51 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 3 | 6 | 99.47% | 27.26% |
| vivo | 57 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | H | 6 | 6 | 95.63% | 9.72% |
| vivo | 58 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 6 | 6 | 94.18% | 22.95% |

1. **Please provide your comment on the above observations.**

|  |  |
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| Company | Comment |
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###### InH

**General Observations**

* In FR1, DL+UL only evaluation, InH, VR30, the enhanced CDRX scheme provides the mean power saving gain of [27.31]% in the range of [9.36 ~ 35.35]% with *marginal* loss in DL+UL UE satisfied rate.

Table 86 Source specific data: eCDRX, FR1, DL-only, InH, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| ZTE, Sanechips | 29 | R1-2108889 | eCDRX | 16 | 6 | 3 | drx-startoffset change additional active time | H | 11 | 11 | 83.00% | 33.10% |
| ZTE, Sanechips | 30 | R1-2108889 | eCDRX | 16 | 6 | 3 | drx-startoffset change additional active time | L | 10 | 11 | 85.83% | 32.30% |
| ZTE, Sanechips | 31 | R1-2108889 | eCDRX | 16 | 6 | 4 | drx-startoffset change additional active time | H | 11 | 11 | 87.12% | 29.00% |
| ZTE, Sanechips | 34 | R1-2108889 | eCDRX | 16 | 6 | 3 | drx-startoffset change additional active time | H | 11 | 11 | 85.60% | 32.90% |
| ZTE, Sanechips | 35 | R1-2108889 | eCDRX | 16 | 6 | 3 | drx-startoffset change additional active time | L | 10 | 11 | 90.30% | 34.10% |
| vivo | 4 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | L | 5 | 10 | 100.00% | 13.05% |
| vivo | 5 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 5 | 10 | 100.00% | 28.38% |
| vivo | 6 | R1-2109008 | eCDRX | 16 | 3 | 3 | with jitter handling | L | 5 | 10 | 100.00% | 35.35% |
| vivo | 12 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | H | 10 | 10 | 91.94% | 9.36% |
| vivo | 13 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 10 | 10 | 91.25% | 23.84% |
| vivo | 14 | R1-2109008 | eCDRX | 16 | 3 | 3 | with jitter handling | H | 10 | 10 | 91.67% | 29.06% |

**General Observations**

* In FR1, DL+UL only evaluation, DU, VR45, the enhanced CDRX scheme provides the mean power saving gain of [23.52]% in the range of [9.42 ~ 35.09]% with *marginal* loss in DL+UL UE satisfied rate.

Table 87 Source specific data: eCDRX, FR1, DL-only, InH, VR45

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| ZTE, Sanechips | 37 | R1-2108889 | eCDRX | 16 | 6 | 4 | drx-startoffset change additional active time | H | 7 | 7 | 86.30% | 29.70% |
| vivo | 20 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | L | 3 | 5 | 100.00% | 11.96% |
| vivo | 21 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 3 | 5 | 100.00% | 26.74% |
| vivo | 22 | R1-2109008 | eCDRX | 16 | 3 | 3 | with jitter handling | L | 3 | 5 | 100.00% | 35.09% |
| vivo | 28 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | H | 5 | 5 | 96.67% | 9.42% |
| vivo | 29 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 5 | 5 | 93.89% | 22.61% |
| vivo | 30 | R1-2109008 | eCDRX | 16 | 3 | 3 | with jitter handling | H | 5 | 5 | 94.44% | 29.12% |

1. **Please provide your comment on the above observations.**

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| Company | Comment |
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###### UMa

**Source Specific Observations**

* In FR1, DL+UL only evaluation, DU, VR30, the enhanced CDRX scheme provides the mean power saving gain of [18.88]% in the range of [10.05 ~ 29.06] % with *marginal* loss in DL+UL UE satisfied rate.

Table 88 Source specific data: eCDRX, FR1, DL-only, UMa, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 64 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | L | 4 | 8 | 98.81% | 0.00% | 0.00% | 13.09% |
| vivo | 65 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 4 | 8 | 97.22% | 0.00% | 0.00% | 29.06% |
| vivo | 71 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | H | 8 | 8 | 93.35% | 0.00% | 0.00% | 10.05% |
| vivo | 72 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 8 | 8 | 91.87% | 0.00% | 0.00% | 23.33% |

**Source Specific Observations**

* In FR1, DL+UL only evaluation, DU, VR45, the enhanced CDRX scheme provides the mean power saving gain of [18.22]% in the range of [9.86 ~ 27.33%] with *marginal* loss in DL+UL UE satisfied rate.

Table 89 Source specific data: eCDRX, FR1, DL-only, UMa, VR45

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 78 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | L | 2 | 4 | 96.83% | 0.00% | 0.00% | 12.09% |
| vivo | 79 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | L | 2 | 4 | 96.83% | 0.00% | 0.00% | 27.33% |
| vivo | 85 | R1-2109008 | eCDRX | 16 | 10 | 4 | adapting to the lower bound of jitter range | H | 4 | 4 | 94.05% | 0.00% | 0.00% | 9.86% |
| vivo | 86 | R1-2109008 | eCDRX | 16 | 6 | 4 | adapting to quasi-period position | H | 4 | 4 | 91.67% | 0.00% | 0.00% | 23.59% |

1. **Please provide your comment on the above observations.**

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| Company | Comment |
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##### UL-only Evaluation

Table 90 Summary of FR1, UL-only power evaluation results for eCDRX

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | PS Gain (%), Note 1 | |
| Mean (%) | Range (%) |
| DU | VR/CG Pose | 0.2 | eCDRX | [31.94] | [26.62 ~ 37.27%] |
| AR UL 1 / 2 streams | 10.2 | eCDRX | [25.56]% | [19.89 ~ 32.02%] |
| InH | VR/CG Pose | 0.2 | eCDRX | [31.58]% | [26.33 ~ 36.83%] |
| AR UL 1 / 2 streams | 10.2 | eCDRX | [26.68]% | [22.17 ~ 35.24%] |

1. **Please provide your comment on the above table.**

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| --- | --- |
| Company | Comment |
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|  |  |

###### DU

**Source Specific Observations**

* In FR1, UL only evaluation, DU, VR/CG Pose only, the enhanced CDRX scheme provides the mean power saving gain of [31.94]% in the range of [26.62 ~ 37.27%] with *marginal* loss in UL UE satisfied rate.

Table 91 Source specific data: eCDRX, FR1, UL-only, DU, VR/CG Pose only

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 151 | R1-2109008 | R15/16CDRX | 4 | 2 | 1 | 0 | H | 20 | 20 | 0.00% | 94.84% | 0.00% | 26.62% |
| vivo | 152 | R1-2109008 | R15/16CDRX | 8 | 3 | 1 | 0 | H | 20 | 20 | 0.00% | 93.81% | 0.00% | 37.27% |

**Source Specific Observations**

* In FR1, UL only evaluation, DU, AR UL 1&2 streams, the enhanced CDRX scheme provides the mean power saving gain of [25.56]% in the range of [19.89 ~ 32.02%] with *marginal* loss in UL UE satisfied rate.

Table 92 Source specific data: eCDRX, FR1, UL-only, DU, AR UL 1 & 2 stream

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | % of UL satisfied UE | % of DL+UL satisfied UE | PSG (%) |
| vivo | 156 | R1-2109008 | eCDRX | 16 | 6 | 4 | 0 | L | 5 | 9 | 0.00% | 95.56% | 0.00% | 32.02% |
| vivo | 161 | R1-2109008 | eCDRX | 16 | 6 | 4 | 0 | H | 9 | 9 | 0.00% | 91.60% | 0.00% | 28.99% |
| vivo | 205 | R1-2109008 | eCDRX | 16 | 6 | 4 | 0 | L | 4 | 7 | 0.00% | 100.00% | 0.00% | 21.35% |
| vivo | 210 | R1-2109008 | eCDRX | 16 | 6 | 4 | 0 | H | 7 | 7 | 0.00% | 90.48% | 0.00% | 19.89% |

1. **Please provide your comment on the above observations.**

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| Company | Comment |
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###### InH

**Source Specific Observations**

* In FR1, UL only evaluation, DU, VR/CG Pose only, the enhanced CDRX scheme provides the mean power saving gain of [31.58]% in the range of [26.33 ~ 36.83%] with *marginal* loss in UL UE satisfied rate.

Table 93 Source specific data: eCDRX, FR1, UL-only, InH, VR/CG Pose only

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 137 | R1-2109008 | AlwaysOn - baseline | 0 | 0 | 0 | 0 | H | 20 | 20 | 100.00% | - |
| vivo | 138 | R1-2109008 | R15/16CDRX | 4 | 2 | 1 | 0 | H | 20 | 20 | 94.31% | 26.33% |
| vivo | 139 | R1-2109008 | R15/16CDRX | 8 | 3 | 1 | 0 | H | 20 | 20 | 93.33% | 36.83% |

**Source Specific Observations**

* In FR1, UL only evaluation, DU, AR UL 1& 2 streams, the enhanced CDRX scheme provides the mean power saving gain of [26.68]% in the range of [22.17 ~ 35.24%] with *marginal* loss in UL UE satisfied rate.

Table 94 Source specific data: eCDRX, FR1, UL-only, InH, AR UL 1 & 2 streams

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 143 | R1-2109008 | eCDRX | 16 | 6 | 4 | 0 | L | 7 | 13 | 100% | 35.24% |
| vivo | 148 | R1-2109008 | eCDRX | 16 | 6 | 4 | 0 | H | 13 | 13 | 92.38% | 33.64% |
| vivo | 195 | R1-2109008 | eCDRX | 16 | 6 | 4 | 0 | L | 6 | 12 | 100% | 23.66% |
| vivo | 200 | R1-2109008 | eCDRX | 16 | 6 | 4 | 0 | H | 12 | 12 | 91.90% | 22.17% |

1. **Please provide your comment on the above observations.**

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| Company | Comment |
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###### UMa

No results available for UMa

#### FR2

##### DL-only evaluation

Table 95 Summary of FR2, DL-only power evaluation results for eCDRX

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | PS Gain (%), Note 1 | |
| Mean (%) | Range (%) |
| DU | VR | 30 | eCDRX | [31.97]% | [31.30 ~ 32.63%] |
| 45 | eCDRX | [27.87]% | [27.16 ~ 28.57%] |
| InH | VR | 30 | eCDRX | [15.10]% | [0.4 ~ 34.89%] |
| 45 | eCDRX | [28.81]% | [28.37 ~ 29.25%] |

1. **Please provide your comment on the above table.**

|  |  |
| --- | --- |
| Company | Comment |
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###### DU

**Source Specific Observations**

* In FR2, DL only evaluation, DU, VR30, the enhanced CDRX scheme provides the mean power saving gain of [31.97]% in the range of [31.30 ~ 32.63%] with *marginal* loss in DL UE satisfied rate.

Table 96 Source specific data: eCDRX, FR2, DL-only, DU, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 116 | R1-2109008 | eCDRX | 16 | 8 | 4 | adapting to quasi-period position | L | 7 | 13 | 99.09% | 32.63% |
| vivo | 122 | R1-2109008 | eCDRX | 16 | 8 | 4 | adapting to quasi-period position | H | 13 | 13 | 91.97% | 31.30% |

**Source Specific Observations**

* In FR2, DL only evaluation, DU, VR45, the enhanced CDRX scheme provides the mean power saving gain of [27.87]% in the range of [27.16 ~ 28.57%] with *marginal* loss in DL UE satisfied rate.

Table 97 Source specific data: eCDRX, FR2, DL-only, DU, VR45

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 128 | R1-2109008 | eCDRX | 16 | 8 | 4 | adapting to quasi-period position | L | 4 | 8 | 100.00% | 28.57% |
| vivo | 134 | R1-2109008 | eCDRX | 16 | 8 | 4 | adapting to quasi-period position | H | 8 | 8 | 91.47% | 27.16% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
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###### InH

**General Observations**

* In FR2, DL only evaluation, InH, VR30, the enhanced CDRX scheme provides the mean power saving gain of [15.10]% in the range of [0.4 ~ 34.89%] with *marginal* loss in DL UE satisfied rate.

Table 98 Source specific data: eCDRX, FR2, DL-only, DU, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 92 | R1-2109008 | eCDRX | 16 | 8 | 4 | adapting to quasi-period position | L | 4 | 8 | 98.61% | 34.89% |
| vivo | 98 | R1-2109008 | eCDRX | 16 | 8 | 4 | adapting to quasi-period position | H | 8 | 8 | 90.97% | 33.68% |
| QC | 77 | R1-2110216 | eCDRX | 16/16/15 | 4 | 4 | 0 | H | 5 | 5 | 100.00% | 18.44% |
| QC | 78 | R1-2110216 | eCDRX | 16/16/15 | 8 | 8 | 0 | H | 5 | 5 | 100.00% | 7.44% |
| QC | 79 | R1-2110216 | eCDRX | 16/16/15 | 8 | 16 | 0 | H | 5 | 5 | 100.00% | 0.40% |
| QC | 81 | R1-2110216 | eCDRX | 16/16/15 | 4 | 4 | 0 | H | 5 | 5 | 25.00% | 25.00% |
| QC | 82 | R1-2110216 | eCDRX | 16/16/15 | 8 | 8 | 0 | H | 5 | 5 | 84.00% | 9.20% |
| QC | 83 | R1-2110216 | eCDRX | 16/16/15 | 8 | 16 | 0 | H | 5 | 5 | 90.00% | 1.64% |

**General Observations**

* In FR2, DL only evaluation, InH, VR45, the enhanced CDRX scheme provides the mean power saving gain of [28.81]% in the range of [28.37 ~ 29.25%] with *marginal* loss in DL UE satisfied rate.

Table 99 Source specific data: eCDRX, FR2, DL-only, DU, VR45

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| vivo | 104 | R1-2109008 | eCDRX | 16 | 8 | 4 | adapting to quasi-period position | L | 2 | 4 | 100.00% | 29.25% |
| vivo | 110 | R1-2109008 | eCDRX | 16 | 8 | 4 | adapting to quasi-period position | H | 4 | 4 | 91.67% | 28.37% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
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##### UL-only evaluation

Table 100 Summary of FR1, UL-only power evaluation results for eCDRX

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | PS scheme | PS Gain (%), Note 1 | |
| Mean (%) | Range (%) |
| AR UL 1 stream | 10 | eCDRX | [32.35] | [31.72 ~ 32.97] |
| AR UL 1 stream | 10 | eCDRX | [37.57]% | [36.79 ~ 38.35] |

1. **Please provide your comment on the above table.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

###### DU

**General Observations**

* In FR2, DL only evaluation, DU, AR UL 1 stream, the enhanced CDRX scheme provides the mean power saving gain of [32.35]% in the range of [31.72 ~ 32.97%] with *marginal* loss in UL UE satisfied rate.

Table 101 Source specific data: eCDRX, FR2, UL-only, DU, AR UL 1 stream

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 185 | R1-2109008 | eCDRX | 16 | 8 | 4 | 0 | L | 4 | 8 | 99.60% | 32.97% |
| vivo | 190 | R1-2109008 | eCDRX | 16 | 8 | 4 | 0 | H | 8 | 8 | 90.67% | 31.72% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
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|  |  |
|  |  |

###### InH

**General Observations**

* In FR2, DL only evaluation, InH, AR UL 1 stream, the enhanced CDRX scheme provides the mean power saving gain of [37.57]% in the range of [36.79 ~ 38.35%] with *marginal* loss in UL UE satisfied rate.

Table 102 Source specific data: eCDRX, FR2, UL-only, InH, AR UL 1 stream

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of UL satisfied UE | PSG (%) |
| vivo | 172 | R1-2109008 | eCDRX | 16 | 8 | 4 | 0 | L | 4 | 8 | 100.00% | 38.35% |
| vivo | 177 | R1-2109008 | eCDRX | 16 | 8 | 4 | 0 | H | 8 | 8 | 92.36% | 36.79% |

1. **Please provide your comment on the above observations.**

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| --- | --- |
| Company | Comment |
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### Jitter Handling

Table 103 Summary of PS schemes for jitter handlings

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | Direction | PS scheme | PS Gain (%), Note 1 | | Source |
| Mean (%) | Range (%) |
| DU | VR | 30 | DL+UL | PDCCH skipping with jitter handling | [30.58] | [19.98 ~ 43.63] | vivo |
| DL | fast/dense WUS for jitter handling | [31] |  | QC |
| AR | 30 | DL+UL | PDCCH skipping with jitter handling | [23.79] | [11.98 ~ 40.21%] | vivo |
| InH | VR | 30 | DL+UL | PDCCH skipping with jitter handling | [31.30] | [21.78 ~ 41.62%] | vivo |
| AR | 30 | DL+UL | PDCCH skipping with jitter handling | [24.70] | [12.51 ~ 39.29%] | vivo |
| Note 1 : PSG was computed for the cases only with marginal loss in % of satisfied UE. | | | | | | | |

1. **Please provide your comment on the above table.**

|  |  |
| --- | --- |
| Company | Comment |
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**General Observations**

* Proper jitter handling could improve PSG in the range of [23.79~31.3].

**Source Specific Observations**

* In FR1, DL+UL evaluation, DU, VR30, the PDCCH skipping with jitter handling scheme provides the mean power saving gain of [40.64]% in the range of [37.65 ~ 43.63%] with *marginal* loss in DL+UL UE satisfied rate.

Table 104 Source specific data: FR1, DL+UL, DU, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL+UL satisfied UE | PSG (%) |
| vivo | 229 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | L | 7 | 13 | 100.00% | 43.63% |
| vivo | 235 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | H | 13 | 13 | 91.94% | 37.65% |

**Source Specific Observations**

* In FR1, DL+UL evaluation, DU, AR30, the PDCCH skipping with jitter handling scheme provides the mean power saving gain of [34.11]% in the range of [30.63 ~ 40.21%] with *marginal* loss in DL+UL UE satisfied rate.

Table 105 Source specific data: FR1, DL+UL, DU, AR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL+UL satisfied UE | PSG (%) |
| vivo | 253 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | L | 5 | 9 | 95.87% | 40.21% |
| vivo | 259 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | H | 9 | 9 | 91.89% | 33.36% |
| vivo | 277 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | L | 4 | 7 | 100.00% | 32.25% |
| vivo | 283 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | H | 7 | 7 | 91.38% | 30.63% |

**Source Specific Observations**

* In FR1, DL+UL evaluation, InH, VR30, the PDCCH skipping with jitter handling scheme provides the mean power saving gain of [40.74]% in the range of [39.86 ~ 41.62%] with *marginal* loss in DL+UL UE satisfied rate.

Table 106 Source specific data: FR1, DL+UL, InH, VR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL+UL satisfied UE | PSG (%) |
| vivo | 217 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | L | 5 | 10 | 100.00% | 41.62% |
| vivo | 223 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | H | 10 | 10 | 91.11% | 39.86% |

**Source Specific Observations**

* In FR1, DL+UL evaluation, InH, AR30, the PDCCH skipping with jitter handling scheme provides the mean power saving gain of [34.04]% in the range of [30.45 ~ 39.29%] with *marginal* loss in DL+UL UE satisfied rate.

Table 107 Source specific data: FR1, DL+UL, InH, AR30

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL+UL satisfied UE | PSG (%) |
| vivo | 241 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | L | 5 | 10 | 100.00% | 39.29% |
| vivo | 247 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | H | 10 | 10 | 91.67% | 34.46% |
| vivo | 265 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | L | 5 | 10 | 100.00% | 31.97% |
| vivo | 271 | R1-2109008 | R17 PDCCH skipping | 0 | 0 | 0 | with jitter handling | H | 10 | 10 | 91.11% | 30.45% |

**Source Specific Observations**

* In FR1, DL evaluation, DU, VR30, the fast/dense WUS for jitter handling scheme provides the mean power saving gain of [31.00]% with *marginal* loss in DL UE satisfied rate.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| QC | 59 | R1-2110216 | fast / dense WUS + eCDRX | 16/17/17 | 6 | 6 | 0 | H | 11 | 11 | 99.30% | 31.00% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

### XR dedicated PDCCH monitoring window

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Scen-arios | App | DL Bit rate (Mbps) | Direction | Assumptions | PS Gain (%), Note 1 | | Source |
| Mean (%) | Range (%) |
| InH | VR | 30 | DL | PDCCH monitoring window | [15.3] | [3.87~29.44] | CATT |
| Note 1 : PSG was computed for the cases only with marginal loss in % of DL satisfied UE. | | | | | | | |

**Source Specific Observations**

* In FR1, DL evaluation, DU, VR30, the XR dedicated PDCCH monitoring window scheme provides the mean power saving gain of [15.3]% in the range of [3.87~29.44]% with *marginal* loss in DL UE satisfied rate.

Table 108 Source specific data: FR1, DL, InH, VR30, XR dedicated PDCCH monitoring window

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| CATT | 4 | R1-2109200 | XR-dedicated PDCCH monitoring window | Monitoring cycle=8ms; Monitoring window=6ms | H | 12 | 12 | 90.00% | 3.87% |
| CATT | 5 | R1-2109200 | XR-dedicated PDCCH monitoring window | Monitoring cycle=16ms; Monitoring window=12ms | H | 12 | 12 | 86.67% | 3.87% |
| CATT | 6 | R1-2109200 | XR-dedicated PDCCH monitoring window with go-to-sleep | Monitoring cycle=16.67ms; Monitoring window=16.67ms | H | 12 | 12 | 90.00% | 24.01% |
| CATT | 7 | R1-2109200 | XR-dedicated PDCCH monitoring window with PDCCH skipping and go-to-sleep | Monitoring cycle=16.67ms; Monitoring window=16.67ms | H | 12 | 12 | 89.16% | 29.44% |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

### Network coding and eCDRX

**Source Specific Observations**

* In FR1, DL evaluation, DU, VR30, network coding and eCDRX together provides the mean power saving gain of [7]% in the range of [-0.2~11]% with *marginal* loss in DL UE satisfied rate.

Table 109 Source specific data: FR1, DL, VR30, Network coding + eCDRX

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | data rate | Initial BLER | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| QC | 84 | R1-2109200 | Network/outer coding + eCDRX | 8 | 0.1 | Note 1,2 | L | 1 |  |  | 6% |
| QC | 85 | R1-2109200 | Network/outer coding + eCDRX | 30 | 0.1 | Note 1,2 | L | 1 |  |  | 10% |
| QC | 86 | R1-2109200 | Network/outer coding + eCDRX | 50 | 0.1 | Note 1,2 | L | 1 |  |  | 7% |
| QC | 87 | R1-2109200 | Network/outer coding + eCDRX | 8 | 0.05 | Note 1,2 | L | 1 |  |  | -0.2% |
| QC | 88 | R1-2109200 | Network/outer coding + eCDRX | 30 | 0.05 | Note 1,2 | L | 1 |  |  | 11% |
| QC | 89 | R1-2109200 | Network/outer coding + eCDRX | 50 | 0.05 | Note 1,2 | L | 1 |  |  | 7% |
| Note 1. HARQ assumption: Use of field data to obtain correlation between successive TB transmissions; Markov model  Note 2. The network/outer coding simulations do not follow 3GPP RAN1 assumptions. We model MAC and above with fixed TB size + HARQ BLER probability. | | | | | | | | | | | |

1. **Please provide your comment on the above observations.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |

### Additional packet delay budget with play out buffer

**Source Specific Observations**

* In FR1, DL evaluation, DU, VR30, additional packet delay budget with play out buffer provides the mean power saving gain of [27.47]% in the range of [26.43~28.51]% with *marginal* loss in DL UE satisfied rate.

Table 110 Source specific data: FR1, DL, VR30, additional packet delay budget with play out buffer

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| source | data row index | Tdoc source | Power saving scheme | CDRX cycle (ms) | ODT (ms) | IAT  (ms) | Additional Assumptions | Load H/L | N1 | C1 | % of DL satisfied UE | PSG (%) |
| CATT | 8 | R1-2109200 | CDRX(16,8,4) with go-to-sleep with UE playout buffer | 0 | 0 | 0 | 0 | H | 12 | 12 | 94.17% | 26.43% |
| CATT | 9 | R1-2109200 | C-DRX(16,8,4) with PDCCH skipping and go-to-sleep with UE playout buffer | 0 | 0 | 0 | 0 | H | 12 | 12 | 93.30% | 28.51% |