3GPP TSG RAN WG1 #107-e R1-2112669

e-Meeting, November 11th – 19th, 2021

Source: Moderator (vivo)

Title: [DRAFT] TR section – Mobility evaluation

Agenda Item: 8.14.1

Document for: Information

# Foreword

# Scope

…

================= (Unchanged part omitted) ==========================

# References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

1. 3GPP TR 21.905: "Vocabulary for 3GPP Specifications"
2. 3GPP RP-201145: "Revised SI on XR Evaluations for XR"
3. 3GPP R1-2104023: “LS on Status Update on XR Traffic”
4. 3GPP S4-210614: “FS\_XRTRaffic: Permanent document, v0.6.0”
5. 3GPP TR 23.501: “System architecture for the 5G System (5GS)”
6. 3GPP TR 38.840: “Study on User Equipment (UE) power saving in NR”
7. 3GPP R1-2101765, “LS on XR-Traffic Models”

|  |  |
| --- | --- |
| Source 1 | Apple |
| Source 2 | AT&T |
| Source 3 | CATT |
| Source 4 | CEWiT |
| Source 5 | China Unicom |
| Source 6 | CMCC |
| Source 7 | Ericsson |
| Source 8 | FUTUREWEI |
| Source 9 | Huawei |
| Source 10 | Intel |
| Source 11 | InterDigital |
| Source 12 | ITRI |
| Source 13 | LG |
| Source 14 | MediaTek |
| Source 15 | Nokia |
| Source 16 | Qualcomm |
| Source 17 | OPPO |
| Source 18 | vivo |
| Source 19 | Xiaomi |
| Source 20 | ZTE |

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# XR Mobility evaluations

============Start of Text update for TR section – Mobility evaluation =============

## Purpose of study

The mobility study is to understand the mobility performance of XR applications. Note that the mobility performance of XR depends on the evaluation assumptions including mobility procedures, traffic models, and user satisfaction criteria, etc. Thus, the mobility metric should be understood as a conditional metric for the given assumption. From this study, we can identify the mobility performance of XR applications in terms of the number of XR packets lost due to a handover (HO) event and the minimum target time interval between HO events.

## KPI

The KPI of the mobility evaluation is *XR mobility* which is defined as mobility performance metrics {*N*, *T*}, where *N* is the number of consecutive XR packets lost due to a HO event and *T* is the minimum target time interval between HO events.

The details of the mobility evaluation methodologies are found in Annex A.4.

## Mobility evaluation results

This section is to capture the evaluation results and the corresponding observations for XR mobility. The following evaluation results and observations can be applied to both UL and DL traffic models for XR.

### Consecutive XR packets lost due to a HO event, *N*

The evaluation results of N are evaluated with variation of the frame generation rate of the flow in fps (F), packet delay budget in ms (PDB) and the HO interruption time in ms (Y), as summarized in Table 10.3.1‑1.

**Table 10.3.1‑1. Summary of evaluation results of N**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***F*(fps)** | ***PDB* (ms)** | ***Y* (ms)** | ***N* (packets)** | **Source(s)** | **Note** |
| 30 | 10 | 0~10 | 0~0.3 | Source 20 | Note 1 |
| 60 | 10 | 0~10 | 0~0.6 | Source 20 | Note 1 |
| 0 | Source 7, Source 9, Source 15 | Note 2 |
| 10~30 | 0.6~1 | Source 7, Source 9, Source 15 |  |
| 40~100 | 1.8~6 | Source 3, Source 7, Source 9, Source 10, Source 13, Source 14, Source 15, Source 17, Source 18 |  |
| 100~1000 | 7.9~51 | Source 10, Source 17 |  |
| 1000~4212 | 97~252 | Source 17 |  |
| 15 | 0~15 | 0 | Source 7, Source 15 | Note 2 |
| 15~30 | 0.3~1 | Source 7, Source 15 |  |
| 40~100 | 1.51~6 | Source 3, Source 6, Source 7, Source 13, Source 14, Source 15, Source 18 |  |
| 30 | 0~30 | 0 | Source 7, Source 15 | Note 2 |
| 40~100 | 0.6~5 | Source 7, Source 14, Source 15, Source 18 |  |
| 90 | 10 | 40~100 | 3.78~6.48 | Source 18 |  |
| 15 | 40~100 | 3.33~6.03 | Source 18 |  |
| 30 | 40~100 | 1.98~4.68 | Source 18 |  |
| 120 | 10 | 0~10 | 0~1.2 | Source 20 | Note 1 |
| 40~100 | 5.04~8.64 | Source 18 |  |
| 15 | 40~100 | 4.44~8.04 | Source 18 |  |
| 30 | 40~100 | 2.64~6.24 | Source 18 |  |
| 250 | 10 | 0~10 | 0 | Source 7, Source 15 | Note 2 |
| 10~30 | 2.5~3 | Source 7, Source 15 |  |
| 40~100 | 7.5~23 | Source 7, Source 13, Source 14, Source 15, Source 18 |  |
| Note 1: *N = Y\* F / 1000 + δ, Y < PDB, where δ = 0. Upper bound, assuming all the packets arriving within HO interruption time (Y) are lost*  Note 2: *N = 0, Y < PDB. Lower bound, assuming all the packets arriving within HO interruption time are successfully received* | | | | | |

The followings are observed from the above Table 10.3.1‑1,

* For XR application with *F*=30 FPS and *PDB*=10ms, with the range of *Y* 0~10ms, it is observed by Source 20 that the range of *N* is [0, 0.3) packets.
* For XR application with *F*=60 FPS and *PDB*=10ms, with the range of *Y* 0~10ms, it is observed by Source 20 that the range of *N* is [0, 0.6) packets.
* For XR application with *F*=60 FPS and *PDB*=10ms,
  + with the range of *Y* 0~10ms, it is observed by Source 7, Source 9, Source 15 that *N* is 0 packet.
  + with the range of *Y* 10~30ms, it is observed by Source 7, Source 9, Source 15 that the range of *N* is 0.6~1 packets.
  + With the range of *Y* 40~100ms, it is observed by Source 3, Source 7, Source 9, Source 10, Source 13, Source 14, Source 15, Source 17, Source 18 that the range of *N* is 1.8~6 packets.
  + With the range of *Y* 100~1000ms, it is observed by Source 10, Source 17 that the range of *N* is 7.9~51 packets.
  + With the range of *Y* 1000~4212ms, it is observed by Source 17 that the range of *N* is 97~252 packets.
* For XR application with *F*=60 FPS and *PDB*=15ms,
  + with the range of *Y* 0~15ms, it is observed by Source 7, Source 15 that *N* is 0 packet.
  + with the range of *Y* 15~30ms, it is observed by Source 7, Source 15 that the range of *N* is 0.3~1 packets.
  + with the range of *Y* 40~100ms, it is observed by Source 3, Source 6, Source 7, Source 13, Source 14, Source 15, Source 18 that the range of *N* is 1.51~6 packets.
* For XR application with *F*=60 FPS and *PDB*=30ms,
  + with the range of *Y* 0~30ms, it is observed by Source 7, Source 15 that *N* is 0 packet.
  + with the range of *Y* 40~100ms, it is observed by Source 7, Source 14, Source 15, Source 18 that the range of *N* is 0.6~5 packets.
* For XR application with *F*=90 FPS and *PDB*=10ms, with the range of *Y* 40~100ms, it is observed by Source 18 that the range of *N* is 3.78~6.48 packets.
* For XR application with *F*=90 FPS and *PDB*=15ms, with the range of *Y* 40~100ms, it is observed by Source 18 that the range of *N* is 3.33~6.03 packets.
* For XR application with *F*=90 FPS and *PDB*=30ms, with the range of *Y* 40~100ms, it is observed by Source 18 that the range of *N* is 1.98~4.68 packets.
* For XR application with *F*=120 FPS and *PDB*=10ms, with the range of *Y* 0~10ms, it is observed by Source 20 that the range of *N* is [0, 1.2) packets.
* For XR application with *F*=120 FPS and *PDB*=10ms, with the range of *Y* 0~100ms, it is observed by Source 18 that the range of *N* is 0~8.64 packets.
* For XR application with *F*=120 FPS and *PDB*=15ms, with the range of *Y* 40~100ms, it is observed by Source 18 that the range of *N* is 5.04~8.64 packets.
* For XR application with *F*=120 FPS and *PDB*=30ms, with the range of *Y* 40~100ms, it is observed by Source 18 that the range of *N* is 2.64~6.24 packets.
* For XR application with *F*=250 FPS and *PDB*=10ms, with the range of *Y* 0~10ms, it is observed by Source 7, Source 15 that *N* is 0 packet.
* For XR application with *F*=250 FPS and *PDB*=10ms, with the range of *Y* 10~30ms, it is observed by Source 7, Source 15 that the range of *N* is 2.5~3 packets.
* For XR application with *F*=250 FPS and *PDB*=10ms, with the range of *Y* 40~100ms, it is observed by Source 7, Source 13, Source 14, Source 15, Source 18 that the range of *N* is 7.5~23 packets.

In summary, based on the evaluation results, it is identified that for XR applications:

* with a given *FPS* and a given *PDB*, *N* increases with the increase of *Y*.
* with a given *PDB* and a given *Y*, *N* increases with the increase of *FPS*.
* with a given *FPS* and a given *Y*, *N* decreases with the increase of *PDB*.
* with a given FPS and a given PDB, N is the lowest when Y is less than PDB

### Minimum target time interval between HO events, *T*

The evaluation results of *T* are evaluated with variation of packet success rate in % (*X*), packet error rate during time outside of handover procedure (*PE,op*), *PDB* and *Y* , as summarized in Table 10.3.2‑1.

**Table 10.3.2‑1. Summary of evaluation results of T**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***X*** | ***PE,op*** | ***PDB (ms)*** | ***Y (ms)*** | ***T (s)*** | **Source(s)** | **Note** |
| 99% | 0% | 10 | 0~10 | 0 | Source 7, Source 9, Source 15 | Note 1 |
| 20 | 1 | Source 7, Source 9, Source 15 |  |
| 40~100 | 3~9 | Source 7, Source 9, Source 13, Source 14, Source 15, Source 18 |  |
| 15 | 0~15 | 0 | Source 7, Source 15 | Note 1 |
| 20 | 0.5 | Source 7, Source 15 |  |
| 40~100 | 2.5~8.5 | Source 7, Source 13, Source 14, Source 15, Source 18 |  |
| 30 | 0~30 | 0 | Source 7, Source 15 | Note 1 |
| 40~100 | 1~7 | Source 7, Source 13, Source 14, Source 15, Source 18 |  |
| 0.01%~0.4% | 10 | 0~10 | 0 | Source 7, Source 9, Source 15 | Note 1 |
| 0~10 | 0~1.66 | Source 20 | Note 2 |
| 20 | 1.16~1.25 | Source 7, Source 9, Source 15 |  |
| 30~100 | 2.22~14.94 | Source 3, Source 7, Source 9, Source 10, Source 13, Source 15, Source 17, Source 18, Source 20 |  |
| 100~1000 | 14.34~93 | Source 10, Source 17 |  |
| 1000~4212 | 164~466 | Source 17 |  |
| 15 | 0~15 | 0 | Source 7, Source 15 | Note 1 |
| 20 | 0.62~0.83 | Source 7, Source 15 |  |
| 40~100 | 3.1~14.11 | Source 3, Source 6, Source 7, Source 13, Source 15, Source 18 |  |
| 30 | 0~30 | 0 | Source 7, Source 15 | Note 1 |
| 40~100 | 1.2~11.62 | Source 7, Source 13, Source 15, Source 18 |  |
| 0.5%~0.7% | 10 | 0~10 | 0 | Source 7, Source 15 | Note 1 |
| 0~10 | 0~3.31 | Source 20 | Note 2 |
| 20 | 2.48 | Source 7, Source 15 |  |
| 30~100 | 3.98~22.4 | Source 7, Source 10, Source 13, Source 14, Source 15, Source 17, Source 18, Source 20 |  |
| 100~1000 | 28.83~168 | Source 10, Source 17 |  |
| 1000~4212 | 323~836 | Source 17 |  |
| 15 | 0~15 | 0 | Source 7, Source 15 | Note 1 |
| 20 | 1.24 | Source 7, Source 15 |  |
| 40~100 | 6.2~21.12 | Source 7, Source 13, Source 14, Source 15, Source 18 |  |
| 30 | 0~30 | 0 | Source 7, Source 15 | Note 1 |
| 40~100 | 2.48~17.4 | Source 7, Source 13, Source 14, Source 15, Source 18 |  |
| 0.8%~0.9% | 10 | 0~10 | 0 | Source 7, Source 15 | Note 1 |
| 0~10 | 0~9.91 | Source 20 | Note 2 |
| 20 | 4.96~9.91 | Source 7, Source 15 |  |
| 30~100 | 9.92~89.2 | Source 7, Source 10, Source 13, Source 14, Source 15, Source 18, Source 20 |  |
| 142 | 70.43~140.7 | Source 10 |  |
| 15 | 0~15 | 0 | Source 7, Source 15 | Note 1 |
| 20 | 2.48~4.95 | Source 7, Source 15 |  |
| 40~100 | 12.4~84.23 | Source 7, Source 13, Source 14, Source 15, Source 18 |  |
| 30 | 0~30 | 0 | Source 7, Source 15 | Note 1 |
| 40~100 | 4.96~69.4 | Source 7, Source 13, Source 14, Source 15, Source 18 |  |
| Note 1: *T = 0, Y < PDB. Lower bound, assuming all the packets arriving within HO interruption time (Y) are successfully received*  Note 2: *T = Y \* (100%-PE,op) / (100%-X- PE,op), Y < PDB. Upper bound, assuming all the packets arriving within HO interruption time (Y) are lost.* | | | | | | |

The followings are observed from the above Table 10.3.2‑1,

* For XR application with *X*=99% and *PDB*=10ms, *PE,op*=0%,
  + with the range of *Y* 0~10ms, it is observed by Source 7, Source 9, Source 15 that *T* is 0 s.
  + with the *Y*=20ms, it is observed by Source 7, Source 9, Source 15 that *T* is 1 s.
  + with the range of *Y* 40~100ms, it is observed by Source 7, Source 9, Source 13, Source 14, Source 15, Source 18 that the range of *T* is 3~9 s.
* For XR application with *X*=99% and *PDB*=15ms, *PE,op*=0%,
  + with the range of *Y* 0~15ms, it is observed by Source 7, Source 15 that *T* is 0 s.
  + with the *Y*=20ms, it is observed by Source 7, Source 15 that *T* is 0.5 s.
  + with the range of *Y* 40~100ms, it is observed by Source 7, Source 13, Source 14, Source 15, Source 18 that the range of *T* is 2.5~8.5 s.
* For XR application with *X*=99% and *PDB*=30ms, *PE,op*=0%,
  + with the range of *Y* 0~30ms, it is observed by Source 7, Source 15 that *T* is 0 s.
  + with the range of *Y* 40~100ms, it is observed by Source 7, Source 13, Source 14, Source 15, Source 18 that the range of *T* is 1~7 s.
* For XR application with *X*=99% and *PDB*=10ms, the range of *PE,op* 0.01%~0.4%, with the range of *Y* 0~10ms, it is observed by Source 20 that the range of *T* is [0, 1.66) s.
* For XR application with *X*=99% and *PDB*=10ms, the range of *PE,op* 0.01%~0.4%,
  + with the range of *Y* 0~10ms, it is observed by Source 7, Source 9, Source 15 that *T* is 0 s.
  + with the *Y*=20ms, it is observed by Source 7, Source 9, Source 15 that the range of *T* is 1.16~1.25 s.
  + with the range of *Y* 30~100ms, it is observed by Source 3, Source 7, Source 9, Source 10, Source 13, Source 15, Source 17, Source 18, Source 20 that the range of *T* is 2.22~14.94 s.
* For XR application with *X*=99% and *PDB*=15ms, the range of *PE,op* 0.01%~0.4%,
  + with the range of *Y* 0~15ms, it is observed by Source 7, Source 15 that *T* is 0 s.
  + with the *Y*=20ms, it is observed by Source 7, Source 15 that the range of *T* is 0.62~0.83 s.
  + with the range of *Y* 40~100ms, it is observed by Source 3, Source 6, Source 7, Source 13, Source 15, Source 18 that the range of *T* is 3.1~14.11 s.
* For XR application with *X*=99% and *PDB*=30ms, the range of *PE,op* 0.01%~0.4%,
  + with the range of *Y* 0~30ms, it is observed by Source 7, Source 15 that *T* is 0 s.
  + with the range of *Y* 40~100ms, it is observed by Source 7, Source 13, Source 15, Source 18 that the range of *T* is 1.2~11.62 s.
* For XR application with *X*=99% and *PDB*=10ms, the range of *PE,op* 0.5%~0.7%, with the range of *Y* 0~10ms, it is observed by Source 20 that the range of *T* is [0, 3.31) s.
* For XR application with *X*=99% and *PDB*=10ms, the range of *PE,op* 0.5%~0.7%,
  + with the range of *Y* 0~10ms, it is observed by Source 7, Source 15 that *T* is 0 s.
  + with the *Y*=20ms, it is observed by Source 7, Source 15 that *T* is 2.48 s.
  + with the range of *Y* 30~100ms, it is observed by Source 7, Source 10, Source 13, Source 14, Source 15, Source 17, Source 18, Source 20 that the range of *T* is 3.98~22.4 s.
* For XR application with *X*=99% and *PDB*=15ms, the range of *PE,op* 0.5%~0.7%,
  + with the range of *Y* 0~15ms, it is observed by Source 7, Source 15 that *T* is 0 s.
  + with the *Y*=20ms, it is observed by Source 7, Source 15 that *T* is 1.24 s.
  + with the range of *Y* 40~100ms, it is observed by Source 7, Source 13, Source 14, Source 15, Source 18 that the range of *T* is 6.2~21.12 s.
* For XR application with *X*=99% and *PDB*=30ms, the range of *PE,op* 0.5%~0.7%,
  + with the range of *Y* 0~30ms, it is observed by Source 7, Source 15 that *T* is 0 s.
  + with the range of *Y* 40~100ms, it is observed by Source 7, Source 13, Source 14, Source 15, Source 18 that the range of *T* is 2.48~17.4 s.
* For XR application with *X*=99% and *PDB*=10ms, the range of *PE,op* 0.8%~0.9%, with the range of *Y* 0~10ms, it is observed by Source 20 that the range of *T* is [0, 9.91) s.
* For XR application with *X*=99% and *PDB*=10ms, the range of *PE,op* 0.8%~0.9%,
  + with the range of *Y* 0~10ms, it is observed by Source 7, Source 15 that *T* is 0 s.
  + with the *Y*=20ms, it is observed by Source 7, Source 15 that the range of *T* is 4.96~9.91 s.
  + with the range of *Y* 30~100ms, it is observed by Source 7, Source 10, Source 13, Source 14, Source 15, Source 18, Source 20 that the range of *T* is 9.92~89.2 s.
* For XR application with *X*=99% and *PDB*=15ms, the range of *PE,op* 0.8%~0.9%,
  + with the range of *Y* 0~15ms, it is observed by Source 7, Source 15 that *T* is 0 s.
  + with the *Y*=20ms, it is observed by Source 7, Source 15 that the range of *T* is 2.48~4.95 s.
  + with the range of *Y* 40~100ms, it is observed by Source 7, Source 13, Source 14, Source 15, Source 18 that the range of *T* is 12.4~84.23 s.
* For XR application with *X*=99% and *PDB*=30ms, the range of *PE,op* 0.8%~0.9%,
  + with the range of *Y* 0~30ms, it is observed by Source 7, Source 15 that *T* is 0 s.
  + with the range of *Y* 40~100ms, it is observed by Source 7, Source 13, Source 14, Source 15, Source 18 that the range of *T* is 4.96~69.4 s.
* It is observed by Source 20 that as the ratio of *PE,op* to *PER* increases, the ratio of increase in *T* vs. *Y* increase exhibits abrupt change at 0.8~0.99, which is insensitive to *PER*.
* It is observed by Source 20 that the abrupt change on the ratio of increase (up to 20 times) in *T* vs. *Y* increase is not sensitive to *PER*.

In summary, based on the evaluation results, it is identified that for XR applications and a given *X*:

* with a given *PE,op* and a given *PDB*, *T* increases with the increase of *Y*.
* with a given *PE,op* and a given *Y*, *T* decreases with the increase of *PDB*.
* with a given *PDB* and a given *Y*, with *PE,op < 100%-X*, *T* non-linearly increases with the increase of *PE,op*.
* with a given PE,op, T is the lowest when Y is less than PDB

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# A.4: Evaluation Methodology for Mobility

For XR/CG mobility evaluation, mobility performance is evaluated analytically while taking into account mobility procedures, traffic models, and user satisfaction criteria.

The mobility performance metrics {*N*, *T*}, where*N* is the number of consecutive XR packets lost due to a HO event and *T* is the minimum target time interval between HO events in ms, are obtained by the following steps:

* Step1. Calculate HO interruption time in ms (*Y*) for existing HO techniques by directly following the requirements given in TS 38.133.
* Step2. For a *Y* and the XR traffic pattern characterized by the packet arrival rate in average as determined by the frame generation rate of the flow in fps (*F*) in 6.1.1.2, and the packet delay budget in ms (*PDB*):
  + *N* is estimated as:
  + *T* is estimated as:
    - where is packet error rate during time outside of handover procedure and *X* is packet success rate (baseline: *X* = 99%, other *X* value(s) can be also evaluated).
  + The case of *Y < PDB* can be optionally evaluated, e,g.

Note 1: mobility evaluation is performed in Dense Urban and Urban Macro.

Note 2: *T* maybe affected by system load, interference, etc.

# Annex B: Source Specific Mobility Performance Evaluation Results

* 1. Consecutive XR packets lost due to a HO event, *N*

**Table B.1‑1. FPS=30, PDB=10ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***F* (fps)** | ***PDB* (ms)** | **Handover type** | **Handover case** | ***Y* (ms)** | ***N* (packets)** | **Note** |
| Source 20 | R1-2111351 | 30 | 10 | DAPS | FR1-to-FR1 | 0 | 0 | Note 1 |
| Source 20 | R1-2111351 | 30 | 10 | DAPS | FR1-to-FR1 | 2 | 0.06 | Note 1 |
| Source 20 | R1-2111351 | 30 | 10 | DAPS | FR1-to-FR1 | 4 | 0.12 | Note 1 |
| Source 20 | R1-2111351 | 30 | 10 | DAPS | FR1-to-FR1 | 6 | 0.18 | Note 1 |
| Source 20 | R1-2111351 | 30 | 10 | DAPS | FR1-to-FR1 | 8 | 0.24 | Note 1 |
| Source 20 | R1-2111351 | 30 | 10 | DAPS | FR1-to-FR1 | 10 | 0.3 | Note 1 |
| Note 1: *N = Y\* F / 1000 + δ, Y < PDB, where δ = 0* | | | | | | | | |

**Table B.1‑2. FPS=60, PDB=10ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***F* (fps)** | ***PDB* (ms)** | **Handover type** | **Handover case** | ***Y* (ms)** | ***N* (packets)** | **Note** |
| Source 18 | R1-2111046 | 60 | 10 | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 2.52 |  |
| Source 18 | R1-2111046 | 60 | 10 | Typical HO | FR1-to-FR1 | 62 | 3.12 |  |
| Source 18 | R1-2111046 | 60 | 10 | Typical HO | FR1-to-FR1 | 82 | 4.32 |  |
| Source 9 | R1-2110811 | 60 | 10 |  |  | 100 | 5.4 |  |
| Source 9 | R1-2110811 | 60 | 10 |  |  | 80 | 4.2 |  |
| Source 9 | R1-2110811 | 60 | 10 |  |  | 70 | 3.6 |  |
| Source 9 | R1-2110811 | 60 | 10 |  |  | 60 | 3 |  |
| Source 9 | R1-2110811 | 60 | 10 |  |  | 40 | 1.8 |  |
| Source 9 | R1-2110811 | 60 | 10 |  |  | 20 | 0.6 |  |
| Source 9 | R1-2110811 | 60 | 10 |  |  | <= 10 | 0 | Note 5 |
| Source 20 | R1-2111351 | 60 | 10 | DAPS | FR1-to-FR1 | 0 | 0 | Note 4 |
| Source 20 | R1-2111351 | 60 | 10 | DAPS | FR1-to-FR1 | 2 | 0.12 | Note 4 |
| Source 20 | R1-2111351 | 60 | 10 | DAPS | FR1-to-FR1 | 4 | 0.24 | Note 4 |
| Source 20 | R1-2111351 | 60 | 10 | DAPS | FR1-to-FR1 | 6 | 0.36 | Note 4 |
| Source 20 | R1-2111351 | 60 | 10 | DAPS | FR1-to-FR1 | 8 | 0.48 | Note 4 |
| Source 20 | R1-2111351 | 60 | 10 | DAPS | FR1-to-FR1 | 10 | 0.6 | Note 4 |
| Source 3 | R1-2111234 | 60 | 10 | Typical HO | FR1-to-FR1 | 66.5 | 3.39 |  |
| Source 3 | R1-2111234 | 60 | 10 | Typical HO | FR2-to-FR1 | 86.5 | 4.59 |  |
| Source 3 | R1-2111234 | 60 | 10 | Typical HO | FR1-to-FR2 | 79.4 | 4.164 |  |
| Source 3 | R1-2111234 | 60 | 10 | Typical HO | FR2-to-FR2 | 59.4 | 2.964 |  |
| Source 3 | R1-2111234 | 60 | 10 | Conditional HO | FR1-to-FR1 | 56.5 | 2.79 |  |
| Source 3 | R1-2111234 | 60 | 10 | Conditional HO | FR2-to-FR1 | 76.5 | 3.99 |  |
| Source 3 | R1-2111234 | 60 | 10 | Conditional HO | FR1-to-FR2 | 69.4 | 3.564 |  |
| Source 3 | R1-2111234 | 60 | 10 | Conditional HO | FR2-to-FR2 | 49.4 | 2.364 |  |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR1, FR2-to-FR2 | 47 | 2 | Note 1 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR1, FR2-to-FR2 | 192 | 11 | Note 1 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR1, FR2-to-FR2 | 352 | 21 | Note 1 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR2, FR2-to-FR1 | 67 | 3 | Note 1 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR2, FR2-to-FR1 | 212 | 12 | Note 1 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR2, FR2-to-FR1 | 372 | 22 | Note 1 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR1 | 52 | 3 | Note 2 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR1 | 272 | 16 | Note 2 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR1 | 512 | 30 | Note 2 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR2-to-FR2 | 87 | 5 | Note 2 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR2-to-FR2 | 832 | 49 | Note 2 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR2-to-FR2 | 1632 | 97 | Note 2 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR1 | 62 | 3 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR1 | 432 | 25 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR1 | 832 | 49 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR2-to-FR1 | 82 | 4 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR2-to-FR1 | 452 | 27 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR2-to-FR1 | 852 | 51 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR2-to-FR2 | 167 | 9 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR2-to-FR2 | 2112 | 126 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR2-to-FR2 | 4192 | 251 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR2 | 187 | 11 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR2 | 2132 | 127 | Note 3 |
| Source 17 | R1-2111349 | 60 | 10 | Typical HO | FR1-to-FR2 | 4212 | 252 | Note 3 |
| Source 10 | R1-2111524 | 60 | 10 | Typical HO | FR1-to-FR1 | 47 | 2.2 | Note 2 |
| Source 10 | R1-2111524 | 60 | 10 | Typical HO | FR1-to-FR1 | 142 | 7.9 | Note 2 |
| Source 15 | R1-2111828 | 60 | 10 | DAPS |  | 2 | 0.00 | Note 5 |
| Source 15 | R1-2111828 | 60 | 10 | Typical HO, Conditional HO |  | 42 | 1.93 |  |
| Source 15 | R1-2111828 | 60 | 10 | Typical HO, Conditional HO |  | 62 | 3.13 |  |
| Source 15 | R1-2111828 | 60 | 10 |  |  | 10 | 0.00 |  |
| Source 15 | R1-2111828 | 60 | 10 |  |  | 20 | 0.60 |  |
| Source 15 | R1-2111828 | 60 | 10 |  |  | 40 | 1.81 |  |
| Source 15 | R1-2111828 | 60 | 10 |  |  | 60 | 3.01 |  |
| Source 15 | R1-2111828 | 60 | 10 |  |  | 80 | 4.22 |  |
| Source 15 | R1-2111828 | 60 | 10 |  |  | 100 | 5.42 |  |
| Source 7 | R1-2112160 | 60 | 10 | DAPS |  | 2 | 0 | Note 5 |
| Source 7 | R1-2112160 | 60 | 10 |  |  | 20 | 1 |  |
| Source 7 | R1-2112160 | 60 | 10 | Typical HO, Conditional HO |  | 40 | 2 |  |
| Source 7 | R1-2112160 | 60 | 10 |  |  | 60 | 3 |  |
| Source 7 | R1-2112160 | 60 | 10 |  |  | 80 | 5 |  |
| Source 7 | R1-2112160 | 60 | 10 |  |  | 100 | 6 |  |
| Source 14 | R1-2112296 | 60 | 10 |  |  | 60 | 3.01 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 40 | 1.8 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 42 | 1.9 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 44 | 2.0 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 46 | 2.2 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 48 | 2.3 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 50 | 2.4 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 52 | 2.5 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 54 | 2.6 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 56 | 2.8 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 58 | 2.9 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 60 | 3.0 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 62 | 3.1 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 64 | 3.2 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 66 | 3.4 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 68 | 3.5 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 70 | 3.6 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 72 | 3.7 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 74 | 3.8 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 76 | 4.0 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 78 | 4.1 |  |
| Source 13 | R1-2112069 | 60 | 10 |  |  | 80 | 4.2 |  |
| Note 1: the target cell is known  Note 2: target cell is an unknown intra-frequency cell  Note 3: target cell is an unknown inter-frequency cell  Note 4: *N = Y\* F / 1000 + δ, Y < PDB, where δ = 0*  Note 5: *N = 0, Y < PDB* | | | | | | | | |

**Table B.1‑3. FPS=60, PDB=15ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***F* (fps)** | ***PDB* (ms)** | **Handover type** | **Handover case** | ***Y* (ms)** | ***N* (packets)** | **Note** |
| Source 18 | R1-2111046 | 60 | 15 | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 2.22 |  |
| Source 18 | R1-2111046 | 60 | 15 | Typical HO | FR1-to-FR1 | 62 | 2.82 |  |
| Source 18 | R1-2111046 | 60 | 15 | Typical HO | FR1-to-FR1 | 82 | 4.02 |  |
| Source 3 | R1-2111234 | 60 | 15 | Typical HO | FR1-to-FR1 | 66.5 | 3.09 |  |
| Source 3 | R1-2111234 | 60 | 15 | Typical HO | FR2-to-FR1 | 86.5 | 4.29 |  |
| Source 3 | R1-2111234 | 60 | 15 | Typical HO | FR1-to-FR2 | 79.4 | 3.864 |  |
| Source 3 | R1-2111234 | 60 | 15 | Typical HO | FR2-to-FR2 | 59.4 | 2.664 |  |
| Source 3 | R1-2111234 | 60 | 15 | Conditional HO | FR1-to-FR1 | 56.5 | 2.49 |  |
| Source 3 | R1-2111234 | 60 | 15 | Conditional HO | FR2-to-FR1 | 76.5 | 3.69 |  |
| Source 3 | R1-2111234 | 60 | 15 | Conditional HO | FR1-to-FR2 | 69.4 | 3.264 |  |
| Source 3 | R1-2111234 | 60 | 15 | Conditional HO | FR2-to-FR2 | 49.4 | 2.064 |  |
| Source 6 | R1-2111632 | 60 | 15 |  |  | 48 | 1.98 |  |
| Source 15 | R1-2111828 | 60 | 15 | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 60 | 15 | Typical HO, Conditional HO |  | 42 | 1.63 |  |
| Source 15 | R1-2111828 | 60 | 15 | Typical HO, Conditional HO |  | 62 | 2.83 |  |
| Source 15 | R1-2111828 | 60 | 15 |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 60 | 15 |  |  | 20 | 0.30 |  |
| Source 15 | R1-2111828 | 60 | 15 |  |  | 40 | 1.51 |  |
| Source 15 | R1-2111828 | 60 | 15 |  |  | 60 | 2.71 |  |
| Source 15 | R1-2111828 | 60 | 15 |  |  | 80 | 3.92 |  |
| Source 15 | R1-2111828 | 60 | 15 |  |  | 100 | 5.12 |  |
| Source 7 | R1-2112160 | 60 | 15 | DAPS |  | 2 | 0 | Note 1 |
| Source 7 | R1-2112160 | 60 | 15 |  |  | 20 | 1 |  |
| Source 7 | R1-2112160 | 60 | 15 | Typical HO, Conditional HO |  | 40 | 2 |  |
| Source 7 | R1-2112160 | 60 | 15 |  |  | 60 | 3 |  |
| Source 7 | R1-2112160 | 60 | 15 |  |  | 80 | 4 |  |
| Source 7 | R1-2112160 | 60 | 15 |  |  | 100 | 6 |  |
| Source 14 | R1-2112296 | 60 | 15 |  |  | 60 | 2.71 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 40 | 1.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 42 | 1.6 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 44 | 1.7 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 46 | 1.9 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 48 | 2.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 50 | 2.1 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 52 | 2.2 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 54 | 2.3 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 56 | 2.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 58 | 2.6 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 60 | 2.7 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 62 | 2.8 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 64 | 2.9 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 66 | 3.1 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 68 | 3.2 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 70 | 3.3 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 72 | 3.4 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 74 | 3.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 76 | 3.7 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 78 | 3.8 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 80 | 3.9 |  |
| Note 1: *N = 0, Y < PDB* | | | | | | | | |

**Table B.1‑4. FPS=60, PDB=30ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***F* (fps)** | ***PDB* (ms)** | **Handover type** | **Handover case** | ***Y* (ms)** | ***N* (packets)** | **Note** |
| Source 18 | R1-2111046 | 60 | 30 | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 1.32 |  |
| Source 18 | R1-2111046 | 60 | 30 | Typical HO | FR1-to-FR1 | 62 | 1.92 |  |
| Source 18 | R1-2111046 | 60 | 30 | Typical HO | FR1-to-FR1 | 82 | 3.12 |  |
| Source 15 | R1-2111828 | 60 | 30 | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 60 | 30 | Typical HO, Conditional HO |  | 42 | 0.72 |  |
| Source 15 | R1-2111828 | 60 | 30 | Typical HO, Conditional HO |  | 62 | 1.93 |  |
| Source 15 | R1-2111828 | 60 | 30 |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 60 | 30 |  |  | 20 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 60 | 30 |  |  | 40 | 0.60 |  |
| Source 15 | R1-2111828 | 60 | 30 |  |  | 60 | 1.81 |  |
| Source 15 | R1-2111828 | 60 | 30 |  |  | 80 | 3.01 |  |
| Source 15 | R1-2111828 | 60 | 30 |  |  | 100 | 4.22 |  |
| Source 7 | R1-2112160 | 60 | 30 | DAPS |  | 2 | 0 | Note 1 |
| Source 7 | R1-2112160 | 60 | 30 |  |  | 20 | 0 | Note 1 |
| Source 7 | R1-2112160 | 60 | 30 | Typical HO, Conditional HO |  | 40 | 1 |  |
| Source 7 | R1-2112160 | 60 | 30 |  |  | 60 | 2 |  |
| Source 7 | R1-2112160 | 60 | 30 |  |  | 80 | 3 |  |
| Source 7 | R1-2112160 | 60 | 30 |  |  | 100 | 5 |  |
| Source 14 | R1-2112296 | 60 | 30 |  |  | 60 | 1.81 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 40 | 0.6 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 42 | 0.7 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 44 | 0.8 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 46 | 1.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 48 | 1.1 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 50 | 1.2 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 52 | 1.3 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 54 | 1.4 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 56 | 1.6 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 58 | 1.7 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 60 | 1.8 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 62 | 1.9 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 64 | 2.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 66 | 2.2 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 68 | 2.3 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 70 | 2.4 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 72 | 2.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 74 | 2.6 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 76 | 2.8 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 78 | 2.9 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 80 | 3.0 |  |
| Note 1: *N = 0, Y < PDB* | | | | | | | | |

**Table B.1‑5. FPS=90, PDB=10/15/30ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***F* (fps)** | ***PDB* (ms)** | **Handover type** | **Handover case** | ***Y* (ms)** | ***N* (packets)** | **Note** |
| Source 18 | R1-2111046 | 90 | 10 | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 3.78 |  |
| Source 18 | R1-2111046 | 90 | 10 | Typical HO | FR1-to-FR1 | 62 | 4.68 |  |
| Source 18 | R1-2111046 | 90 | 10 | Typical HO | FR1-to-FR1 | 82 | 6.48 |  |
| Source 18 | R1-2111046 | 90 | 15 | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 3.33 |  |
| Source 18 | R1-2111046 | 90 | 15 | Typical HO | FR1-to-FR1 | 62 | 4.23 |  |
| Source 18 | R1-2111046 | 90 | 15 | Typical HO | FR1-to-FR1 | 82 | 6.03 |  |
| Source 18 | R1-2111046 | 90 | 30 | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 1.98 |  |
| Source 18 | R1-2111046 | 90 | 30 | Typical HO | FR1-to-FR1 | 62 | 2.88 |  |
| Source 18 | R1-2111046 | 90 | 30 | Typical HO | FR1-to-FR1 | 82 | 4.68 |  |

**Table B.1‑6. FPS=120, PDB=10/15/30ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***F* (fps)** | ***PDB* (ms)** | **Handover type** | **Handover case** | ***Y* (ms)** | ***N* (packets)** | **Note** |
| Source 18 | R1-2111046 | 120 | 10 | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 5.04 |  |
| Source 18 | R1-2111046 | 120 | 10 | Typical HO | FR1-to-FR1 | 62 | 6.24 |  |
| Source 18 | R1-2111046 | 120 | 10 | Typical HO | FR1-to-FR1 | 82 | 8.64 |  |
| Source 18 | R1-2111046 | 120 | 15 | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 4.44 |  |
| Source 18 | R1-2111046 | 120 | 15 | Typical HO | FR1-to-FR1 | 62 | 5.64 |  |
| Source 18 | R1-2111046 | 120 | 15 | Typical HO | FR1-to-FR1 | 82 | 8.04 |  |
| Source 18 | R1-2111046 | 120 | 30 | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 2.64 |  |
| Source 18 | R1-2111046 | 120 | 30 | Typical HO | FR1-to-FR1 | 62 | 3.84 |  |
| Source 18 | R1-2111046 | 120 | 30 | Typical HO | FR1-to-FR1 | 82 | 6.24 |  |
| Source 20 | R1-2111351 | 120 | 10 | DAPS | FR1-to-FR1 | 0 | 0 | Note 1 |
| Source 20 | R1-2111351 | 120 | 10 | DAPS | FR1-to-FR1 | 2 | 0.24 | Note 1 |
| Source 20 | R1-2111351 | 120 | 10 | DAPS | FR1-to-FR1 | 4 | 0.48 | Note 1 |
| Source 20 | R1-2111351 | 120 | 10 | DAPS | FR1-to-FR1 | 6 | 0.72 | Note 1 |
| Source 20 | R1-2111351 | 120 | 10 | DAPS | FR1-to-FR1 | 8 | 0.96 | Note 1 |
| Source 20 | R1-2111351 | 120 | 10 | DAPS | FR1-to-FR1 | 10 | 1.2 | Note 1 |
| Note 1: *N = Y\* F / 1000 + δ, Y < PDB, where δ = 0* | | | | | | | | |

**Table B.1‑7. FPS=250, PDB=10ms**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***F* (fps)** | ***PDB* (ms)** | **Handover type** | **Handover case** | ***Y* (ms)** | ***N* (packets)** | **Note** |
| Source 18 | R1-2111046 | 250 | 10 | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 10.50 |  |
| Source 18 | R1-2111046 | 250 | 10 | Typical HO | FR1-to-FR1 | 62 | 13.00 |  |
| Source 18 | R1-2111046 | 250 | 10 | Typical HO | FR1-to-FR1 | 82 | 18.00 |  |
| Source 15 | R1-2111828 | 250 | 10 | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 250 | 10 | Typical HO, Conditional HO |  | 42 | 8.00 |  |
| Source 15 | R1-2111828 | 250 | 10 | Typical HO, Conditional HO |  | 62 | 13.00 |  |
| Source 15 | R1-2111828 | 250 | 10 |  |  | 10 | 0.00 |  |
| Source 15 | R1-2111828 | 250 | 10 |  |  | 20 | 2.50 |  |
| Source 15 | R1-2111828 | 250 | 10 |  |  | 40 | 7.50 |  |
| Source 15 | R1-2111828 | 250 | 10 |  |  | 60 | 12.50 |  |
| Source 15 | R1-2111828 | 250 | 10 |  |  | 80 | 17.50 |  |
| Source 15 | R1-2111828 | 250 | 10 |  |  | 100 | 22.50 |  |
| Source 7 | R1-2112160 | 250 | 10 | DAPS |  | 2 | 0 | Note 1 |
| Source 7 | R1-2112160 | 250 | 10 |  |  | 20 | 3 |  |
| Source 7 | R1-2112160 | 250 | 10 | Typical HO, Conditional HO |  | 40 | 8 |  |
| Source 7 | R1-2112160 | 250 | 10 |  |  | 60 | 13 |  |
| Source 7 | R1-2112160 | 250 | 10 |  |  | 80 | 18 |  |
| Source 7 | R1-2112160 | 250 | 10 |  |  | 100 | 23 |  |
| Source 14 | R1-2112296 | 250 | 10 |  |  | 60 | 12.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 40 | 7.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 42 | 8.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 44 | 8.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 46 | 9.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 48 | 9.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 50 | 10.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 52 | 10.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 54 | 11.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 56 | 11.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 58 | 12.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 60 | 12.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 62 | 13.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 64 | 13.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 66 | 14.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 68 | 14.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 70 | 15.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 72 | 15.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 74 | 16.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 76 | 16.5 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 78 | 17.0 |  |
| Source 13 | R1-2112069 | 60 | 15 |  |  | 80 | 17.5 |  |
| Note 1: *N = 0, Y < PDB* | | | | | | | | |

* 1. Minimum target time interval between HO events, *T*

**Table B.2‑1. X=99%, PDB=10ms**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***PDB* (ms)** | ***PE,op*** | ***X*** | **Handover type** | **Handover case** | ***Y* (ms)** | ***T* (s)** | **Note** |
| Source 18 | R1-2111046 | 10 | 0.00% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 4.20 |  |
| Source 18 | R1-2111046 | 10 | 0.00% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 5.20 |  |
| Source 18 | R1-2111046 | 10 | 0.00% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 7.20 |  |
| Source 18 | R1-2111046 | 10 | 0.10% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 4.66 |  |
| Source 18 | R1-2111046 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 5.77 |  |
| Source 18 | R1-2111046 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 7.99 |  |
| Source 18 | R1-2111046 | 10 | 0.50% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 8.36 |  |
| Source 18 | R1-2111046 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 10.35 |  |
| Source 18 | R1-2111046 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 14.33 |  |
| Source 18 | R1-2111046 | 10 | 0.90% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 41.62 |  |
| Source 18 | R1-2111046 | 10 | 0.90% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 51.53 |  |
| Source 18 | R1-2111046 | 10 | 0.90% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 71.35 |  |
| Source 9 | R1-2110811 | 10 | 0.00% | 99.0% |  |  | 100 | 9.00 |  |
| Source 9 | R1-2110811 | 10 | 0.00% | 99.0% |  |  | 80 | 7.00 |  |
| Source 9 | R1-2110811 | 10 | 0.00% | 99.0% |  |  | 70 | 6.00 |  |
| Source 9 | R1-2110811 | 10 | 0.00% | 99.0% |  |  | 60 | 5.00 |  |
| Source 9 | R1-2110811 | 10 | 0.00% | 99.0% |  |  | 40 | 3.00 |  |
| Source 9 | R1-2110811 | 10 | 0.00% | 99.0% |  |  | 20 | 1.00 |  |
| Source 9 | R1-2110811 | 10 | 0.00% | 99.0% |  |  | <= 10 | 0.00 | Note 4 |
| Source 9 | R1-2110811 | 10 | 0.14% | 99.0% |  |  | 100 | 10.45 |  |
| Source 9 | R1-2110811 | 10 | 0.14% | 99.0% |  |  | 80 | 8.13 |  |
| Source 9 | R1-2110811 | 10 | 0.14% | 99.0% |  |  | 70 | 6.97 |  |
| Source 9 | R1-2110811 | 10 | 0.14% | 99.0% |  |  | 60 | 5.81 |  |
| Source 9 | R1-2110811 | 10 | 0.14% | 99.0% |  |  | 40 | 3.48 |  |
| Source 9 | R1-2110811 | 10 | 0.14% | 99.0% |  |  | 20 | 1.16 |  |
| Source 9 | R1-2110811 | 10 | 0.14% | 99.0% |  |  | <= 10 | 0.00 | Note 4 |
| Source 3 | R1-2111234 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR1 | 66.5 | 4.697 |  |
| Source 3 | R1-2111234 | 10 | 0.01% | 99.0% | Typical HO | FR2-to-FR2 | 59.4 | 3.979 |  |
| Source 3 | R1-2111234 | 10 | 0.03% | 99.0% | Typical HO | FR1-to-FR1 | 66.5 | 4.792 |  |
| Source 3 | R1-2111234 | 10 | 0.03% | 99.0% | Typical HO | FR2-to-FR2 | 59.4 | 4.061 |  |
| Source 3 | R1-2111234 | 10 | 0.31% | 99.0% | Typical HO | FR1-to-FR1 | 66.5 | 6.718 |  |
| Source 3 | R1-2111234 | 10 | 0.31% | 99.0% | Typical HO | FR2-to-FR2 | 59.4 | 5.692 |  |
| Source 3 | R1-2111234 | 10 | 0.01% | 99.0% | Conditional HO | FR1-to-FR1 | 56.5 | 4.697 |  |
| Source 3 | R1-2111234 | 10 | 0.01% | 99.0% | Conditional HO | FR2-to-FR2 | 49.4 | 3.979 |  |
| Source 3 | R1-2111234 | 10 | 0.03% | 99.0% | Conditional HO | FR1-to-FR1 | 56.5 | 4.997 |  |
| Source 3 | R1-2111234 | 10 | 0.03% | 99.0% | Conditional HO | FR2-to-FR2 | 49.4 | 4.234 |  |
| Source 3 | R1-2111234 | 10 | 0.31% | 99.0% | Conditional HO | FR1-to-FR1 | 56.5 | 6.185 |  |
| Source 3 | R1-2111234 | 10 | 0.31% | 99.0% | Conditional HO | FR2-to-FR2 | 49.4 | 5.24 |  |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR1, FR2-to-FR2 | 47 | 4 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR1, FR2-to-FR2 | 192 | 18 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR1, FR2-to-FR2 | 352 | 35 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR2, FR2-to-FR1 | 67 | 6 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR2, FR2-to-FR1 | 212 | 20 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR2, FR2-to-FR1 | 372 | 37 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1, FR2-to-FR2 | 47 | 4 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1, FR2-to-FR2 | 192 | 20 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1, FR2-to-FR2 | 352 | 38 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR2, FR2-to-FR1 | 67 | 6 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR2, FR2-to-FR1 | 212 | 22 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR2, FR2-to-FR1 | 372 | 40 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1, FR2-to-FR2 | 47 | 7 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1, FR2-to-FR2 | 192 | 36 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1, FR2-to-FR2 | 352 | 68 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR2, FR2-to-FR1 | 67 | 11 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR2, FR2-to-FR1 | 212 | 40 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR2, FR2-to-FR1 | 372 | 72 | Note 1 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR1 | 52 | 4 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR1 | 272 | 26 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR1 | 512 | 51 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR2-to-FR2 | 87 | 8 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR2-to-FR2 | 832 | 83 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR2-to-FR2 | 1632 | 164 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 52 | 5 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 272 | 29 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 512 | 56 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR2-to-FR2 | 87 | 9 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR2-to-FR2 | 832 | 91 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR2-to-FR2 | 1632 | 180 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 52 | 8 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 272 | 52 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 512 | 100 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR2-to-FR2 | 87 | 15 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR2-to-FR2 | 832 | 164 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR2-to-FR2 | 1632 | 323 | Note 2 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 5 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR1 | 432 | 43 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR1 | 832 | 83 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 6 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 432 | 47 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 832 | 91 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 10 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 432 | 84 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 832 | 164 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR2-to-FR1 | 82 | 7 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR2-to-FR1 | 452 | 45 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR2-to-FR1 | 852 | 85 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR2-to-FR1 | 82 | 8 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR2-to-FR1 | 452 | 49 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR2-to-FR1 | 852 | 93 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR2-to-FR1 | 82 | 14 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR2-to-FR1 | 452 | 88 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR2-to-FR1 | 852 | 168 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR2-to-FR2 | 167 | 16 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR2-to-FR2 | 2112 | 212 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR2-to-FR2 | 4192 | 422 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR2-to-FR2 | 167 | 17 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR2-to-FR2 | 2112 | 233 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR2-to-FR2 | 4192 | 464 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR2-to-FR2 | 167 | 31 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR2-to-FR2 | 2112 | 418 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR2-to-FR2 | 4192 | 832 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR2 | 187 | 18 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR2 | 2132 | 214 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.01% | 99.0% | Typical HO | FR1-to-FR2 | 4212 | 424 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR2 | 187 | 20 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR2 | 2132 | 236 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.10% | 99.0% | Typical HO | FR1-to-FR2 | 4212 | 466 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR2 | 187 | 35 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR2 | 2132 | 422 | Note 3 |
| Source 17 | R1-2111349 | 10 | 0.50% | 99.0% | Typical HO | FR1-to-FR2 | 4212 | 836 | Note 3 |
| Source 15 | R1-2111828 | 10 | 0.00% | 99.0% | DAPS |  | 2 | 0 | Note 4 |
| Source 15 | R1-2111828 | 10 | 0.00% | 99.0% | Typical HO, Conditional HO |  | 42 | 3.2 |  |
| Source 15 | R1-2111828 | 10 | 0.00% | 99.0% | Typical HO, Conditional HO |  | 62 | 5.2 |  |
| Source 15 | R1-2111828 | 10 | 0.00% | 99.0% |  |  | 10 | 0 |  |
| Source 15 | R1-2111828 | 10 | 0.00% | 99.0% |  |  | 20 | 1 |  |
| Source 15 | R1-2111828 | 10 | 0.00% | 99.0% |  |  | 40 | 3 |  |
| Source 15 | R1-2111828 | 10 | 0.00% | 99.0% |  |  | 60 | 5 |  |
| Source 15 | R1-2111828 | 10 | 0.00% | 99.0% |  |  | 80 | 7 |  |
| Source 15 | R1-2111828 | 10 | 0.00% | 99.0% |  |  | 100 | 9 |  |
| Source 15 | R1-2111828 | 10 | 0.20% | 99.0% | DAPS |  | 2 | 0.00 | Note 4 |
| Source 15 | R1-2111828 | 10 | 0.20% | 99.0% | Typical HO, Conditional HO |  | 42 | 3.99 |  |
| Source 15 | R1-2111828 | 10 | 0.20% | 99.0% | Typical HO, Conditional HO |  | 62 | 6.49 |  |
| Source 15 | R1-2111828 | 10 | 0.20% | 99.0% |  |  | 10 | 0.00 |  |
| Source 15 | R1-2111828 | 10 | 0.20% | 99.0% |  |  | 20 | 1.25 |  |
| Source 15 | R1-2111828 | 10 | 0.20% | 99.0% |  |  | 40 | 3.74 |  |
| Source 15 | R1-2111828 | 10 | 0.20% | 99.0% |  |  | 60 | 6.24 |  |
| Source 15 | R1-2111828 | 10 | 0.20% | 99.0% |  |  | 80 | 8.73 |  |
| Source 15 | R1-2111828 | 10 | 0.20% | 99.0% |  |  | 100 | 11.23 |  |
| Source 15 | R1-2111828 | 10 | 0.40% | 99.0% | DAPS |  | 2 | 0.00 | Note 4 |
| Source 15 | R1-2111828 | 10 | 0.40% | 99.0% | Typical HO, Conditional HO |  | 42 | 5.31 |  |
| Source 15 | R1-2111828 | 10 | 0.40% | 99.0% | Typical HO, Conditional HO |  | 62 | 8.63 |  |
| Source 15 | R1-2111828 | 10 | 0.40% | 99.0% |  |  | 10 | 0.00 |  |
| Source 15 | R1-2111828 | 10 | 0.40% | 99.0% |  |  | 20 | 1.66 |  |
| Source 15 | R1-2111828 | 10 | 0.40% | 99.0% |  |  | 40 | 4.98 |  |
| Source 15 | R1-2111828 | 10 | 0.40% | 99.0% |  |  | 60 | 8.30 |  |
| Source 15 | R1-2111828 | 10 | 0.40% | 99.0% |  |  | 80 | 11.62 |  |
| Source 15 | R1-2111828 | 10 | 0.40% | 99.0% |  |  | 100 | 14.94 |  |
| Source 15 | R1-2111828 | 10 | 0.60% | 99.0% | DAPS |  | 2 | 0.00 | Note 4 |
| Source 15 | R1-2111828 | 10 | 0.60% | 99.0% | Typical HO, Conditional HO |  | 42 | 7.95 |  |
| Source 15 | R1-2111828 | 10 | 0.60% | 99.0% | Typical HO, Conditional HO |  | 62 | 12.92 |  |
| Source 15 | R1-2111828 | 10 | 0.60% | 99.0% |  |  | 10 | 0.00 |  |
| Source 15 | R1-2111828 | 10 | 0.60% | 99.0% |  |  | 20 | 2.48 |  |
| Source 15 | R1-2111828 | 10 | 0.60% | 99.0% |  |  | 40 | 7.45 |  |
| Source 15 | R1-2111828 | 10 | 0.60% | 99.0% |  |  | 60 | 12.43 |  |
| Source 15 | R1-2111828 | 10 | 0.60% | 99.0% |  |  | 80 | 17.40 |  |
| Source 15 | R1-2111828 | 10 | 0.60% | 99.0% |  |  | 100 | 22.36 |  |
| Source 15 | R1-2111828 | 10 | 0.80% | 99.0% | DAPS |  | 2 | 0.00 | Note 4 |
| Source 15 | R1-2111828 | 10 | 0.80% | 99.0% | Typical HO, Conditional HO |  | 42 | 15.87 |  |
| Source 15 | R1-2111828 | 10 | 0.80% | 99.0% | Typical HO, Conditional HO |  | 62 | 25.79 |  |
| Source 15 | R1-2111828 | 10 | 0.80% | 99.0% |  |  | 10 | 0.00 |  |
| Source 15 | R1-2111828 | 10 | 0.80% | 99.0% |  |  | 20 | 4.96 |  |
| Source 15 | R1-2111828 | 10 | 0.80% | 99.0% |  |  | 40 | 14.88 |  |
| Source 15 | R1-2111828 | 10 | 0.80% | 99.0% |  |  | 60 | 24.80 |  |
| Source 15 | R1-2111828 | 10 | 0.80% | 99.0% |  |  | 80 | 34.72 |  |
| Source 15 | R1-2111828 | 10 | 0.80% | 99.0% |  |  | 100 | 44.64 |  |
| Source 15 | R1-2111828 | 10 | 0.90% | 99.0% | DAPS |  | 2 | 0.00 | Note 4 |
| Source 15 | R1-2111828 | 10 | 0.90% | 99.0% | Typical HO, Conditional HO |  | 42 | 31.71 |  |
| Source 15 | R1-2111828 | 10 | 0.90% | 99.0% | Typical HO, Conditional HO |  | 62 | 51.53 |  |
| Source 15 | R1-2111828 | 10 | 0.90% | 99.0% |  |  | 10 | 0.00 |  |
| Source 15 | R1-2111828 | 10 | 0.90% | 99.0% |  |  | 20 | 9.91 |  |
| Source 15 | R1-2111828 | 10 | 0.90% | 99.0% |  |  | 40 | 29.73 |  |
| Source 15 | R1-2111828 | 10 | 0.90% | 99.0% |  |  | 60 | 49.55 |  |
| Source 15 | R1-2111828 | 10 | 0.90% | 99.0% |  |  | 80 | 69.37 |  |
| Source 15 | R1-2111828 | 10 | 0.90% | 99.0% |  |  | 100 | 89.19 |  |
| Source 7 | R1-2112160 | 10 | 0.00% | 99.0% | DAPS |  | 2 | 0.0 | Note 4 |
| Source 7 | R1-2112160 | 10 | 0.00% | 99.0% |  |  | 20 | 1.0 |  |
| Source 7 | R1-2112160 | 10 | 0.00% | 99.0% | Typical HO, Conditional HO |  | 40 | 3.0 |  |
| Source 7 | R1-2112160 | 10 | 0.00% | 99.0% |  |  | 60 | 5.0 |  |
| Source 7 | R1-2112160 | 10 | 0.00% | 99.0% |  |  | 80 | 7.0 |  |
| Source 7 | R1-2112160 | 10 | 0.00% | 99.0% |  |  | 100 | 9.0 |  |
| Source 7 | R1-2112160 | 10 | 0.20% | 99.0% | DAPS |  | 2 | 0.0 | Note 4 |
| Source 7 | R1-2112160 | 10 | 0.20% | 99.0% |  |  | 20 | 1.2 |  |
| Source 7 | R1-2112160 | 10 | 0.20% | 99.0% | Typical HO, Conditional HO |  | 40 | 3.7 |  |
| Source 7 | R1-2112160 | 10 | 0.20% | 99.0% |  |  | 60 | 6.2 |  |
| Source 7 | R1-2112160 | 10 | 0.20% | 99.0% |  |  | 80 | 8.7 |  |
| Source 7 | R1-2112160 | 10 | 0.20% | 99.0% |  |  | 100 | 11.2 |  |
| Source 7 | R1-2112160 | 10 | 0.40% | 99.0% | DAPS |  | 2 | 0.0 | Note 4 |
| Source 7 | R1-2112160 | 10 | 0.40% | 99.0% |  |  | 20 | 1.7 |  |
| Source 7 | R1-2112160 | 10 | 0.40% | 99.0% | Typical HO, Conditional HO |  | 40 | 5.0 |  |
| Source 7 | R1-2112160 | 10 | 0.40% | 99.0% |  |  | 60 | 8.3 |  |
| Source 7 | R1-2112160 | 10 | 0.40% | 99.0% |  |  | 80 | 11.6 |  |
| Source 7 | R1-2112160 | 10 | 0.40% | 99.0% |  |  | 100 | 14.9 |  |
| Source 7 | R1-2112160 | 10 | 0.60% | 99.0% | DAPS |  | 2 | 0.0 | Note 4 |
| Source 7 | R1-2112160 | 10 | 0.60% | 99.0% |  |  | 20 | 2.5 |  |
| Source 7 | R1-2112160 | 10 | 0.60% | 99.0% | Typical HO, Conditional HO |  | 40 | 7.5 |  |
| Source 7 | R1-2112160 | 10 | 0.60% | 99.0% |  |  | 60 | 12.4 |  |
| Source 7 | R1-2112160 | 10 | 0.60% | 99.0% |  |  | 80 | 17.4 |  |
| Source 7 | R1-2112160 | 10 | 0.60% | 99.0% |  |  | 100 | 22.4 |  |
| Source 7 | R1-2112160 | 10 | 0.80% | 99.0% | DAPS |  | 2 | 0.0 | Note 4 |
| Source 7 | R1-2112160 | 10 | 0.80% | 99.0% |  |  | 20 | 5.0 |  |
| Source 7 | R1-2112160 | 10 | 0.80% | 99.0% | Typical HO, Conditional HO |  | 40 | 14.9 |  |
| Source 7 | R1-2112160 | 10 | 0.80% | 99.0% |  |  | 60 | 24.8 |  |
| Source 7 | R1-2112160 | 10 | 0.80% | 99.0% |  |  | 80 | 34.7 |  |
| Source 7 | R1-2112160 | 10 | 0.80% | 99.0% |  |  | 100 | 44.6 |  |
| Source 7 | R1-2112160 | 10 | 0.90% | 99.0% | DAPS |  | 2 | 0.0 | Note 4 |
| Source 7 | R1-2112160 | 10 | 0.90% | 99.0% |  |  | 20 | 9.9 |  |
| Source 7 | R1-2112160 | 10 | 0.90% | 99.0% | Typical HO, Conditional HO |  | 40 | 29.7 |  |
| Source 7 | R1-2112160 | 10 | 0.90% | 99.0% |  |  | 60 | 49.5 |  |
| Source 7 | R1-2112160 | 10 | 0.90% | 99.0% |  |  | 80 | 69.4 |  |
| Source 7 | R1-2112160 | 10 | 0.90% | 99.0% |  |  | 100 | 89.2 |  |
| Source 14 | R1-2112296 | 10 | 0.00% | 99.0% |  |  | 60 | 5 |  |
| Source 14 | R1-2112296 | 10 | 0.5% | 99.0% |  |  | 60 | 9.95 |  |
| Source 14 | R1-2112296 | 10 | 0.9% | 99.0% |  |  | 60 | 49.55 |  |
| Source 10 | R1-2111524 | 10 | 0.01% | 99.0% | Typical HO | FR1-FR1 | 47 | 3.73 | Note 2 |
| Source 10 | R1-2111525 | 10 | 0.10% | 99.0% | Typical HO | FR1-FR1 | 47 | 4.107 | Note 2 |
| Source 10 | R1-2111526 | 10 | 0.20% | 99.0% | Typical HO | FR1-FR1 | 47 | 4.616 | Note 2 |
| Source 10 | R1-2111527 | 10 | 0.30% | 99.0% | Typical HO | FR1-FR1 | 47 | 5.27 | Note 2 |
| Source 10 | R1-2111528 | 10 | 0.40% | 99.0% | Typical HO | FR1-FR1 | 47 | 6.142 | Note 2 |
| Source 10 | R1-2111529 | 10 | 0.50% | 99.0% | Typical HO | FR1-FR1 | 47 | 7.363 | Note 2 |
| Source 10 | R1-2111530 | 10 | 0.60% | 99.0% | Typical HO | FR1-FR1 | 47 | 9.195 | Note 2 |
| Source 10 | R1-2111531 | 10 | 0.70% | 99.0% | Typical HO | FR1-FR1 | 47 | 12.25 | Note 2 |
| Source 10 | R1-2111532 | 10 | 0.80% | 99.0% | Typical HO | FR1-FR1 | 47 | 18.35 | Note 2 |
| Source 10 | R1-2111533 | 10 | 0.90% | 99.0% | Typical HO | FR1-FR1 | 47 | 36.67 | Note 2 |
| Source 10 | R1-2111524 | 10 | 0.01% | 99.0% | Typical HO | FR1-FR1 | 142 | 14.34 | Note 2 |
| Source 10 | R1-2111525 | 10 | 0.10% | 99.0% | Typical HO | FR1-FR1 | 142 | 15.76 | Note 2 |
| Source 10 | R1-2111526 | 10 | 0.20% | 99.0% | Typical HO | FR1-FR1 | 142 | 17.71 | Note 2 |
| Source 10 | R1-2111527 | 10 | 0.30% | 99.0% | Typical HO | FR1-FR1 | 142 | 20.22 | Note 2 |
| Source 10 | R1-2111528 | 10 | 0.40% | 99.0% | Typical HO | FR1-FR1 | 142 | 23.57 | Note 2 |
| Source 10 | R1-2111529 | 10 | 0.50% | 99.0% | Typical HO | FR1-FR1 | 142 | 28.83 | Note 2 |
| Source 10 | R1-2111530 | 10 | 0.60% | 99.0% | Typical HO | FR1-FR1 | 142 | 35.29 | Note 2 |
| Source 10 | R1-2111531 | 10 | 0.70% | 99.0% | Typical HO | FR1-FR1 | 142 | 47 | Note 2 |
| Source 10 | R1-2111532 | 10 | 0.80% | 99.0% | Typical HO | FR1-FR1 | 142 | 70.43 | Note 2 |
| Source 10 | R1-2111533 | 10 | 0.90% | 99.0% | Typical HO | FR1-FR1 | 142 | 140.7 | Note 2 |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 40 | 3.0 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 42 | 3.2 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 44 | 3.4 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 46 | 3.6 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 48 | 3.8 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 50 | 4.0 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 52 | 4.2 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 54 | 4.4 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 56 | 4.6 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 58 | 4.8 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 60 | 5.0 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 62 | 5.2 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 64 | 5.4 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 66 | 5.6 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 68 | 5.8 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 70 | 6.0 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 72 | 6.2 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 74 | 6.4 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 76 | 6.6 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 78 | 6.8 |  |
| Source 13 | R1-2112069 | 10 | 0.0% | 99.0% |  |  | 80 | 7.0 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 40 | 6.0 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 42 | 6.4 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 44 | 6.8 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 46 | 7.2 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 48 | 7.6 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 50 | 8.0 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 52 | 8.4 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 54 | 8.8 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 56 | 9.2 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 58 | 9.6 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 60 | 10.0 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 62 | 10.3 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 64 | 10.7 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 66 | 11.1 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 68 | 11.5 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 70 | 11.9 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 72 | 12.3 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 74 | 12.7 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 76 | 13.1 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 78 | 13.5 |  |
| Source 13 | R1-2112069 | 10 | 0.5% | 99.0% |  |  | 80 | 13.9 |  |
| Source 13 | R1-2112069 | 10 | 0.00% | 99.0% |  |  | 40 | 3.0 |  |
| Source 13 | R1-2112069 | 10 | 0.05% | 99.0% |  |  | 40 | 3.2 |  |
| Source 13 | R1-2112069 | 10 | 0.10% | 99.0% |  |  | 40 | 3.3 |  |
| Source 13 | R1-2112069 | 10 | 0.15% | 99.0% |  |  | 40 | 3.5 |  |
| Source 13 | R1-2112069 | 10 | 0.20% | 99.0% |  |  | 40 | 3.7 |  |
| Source 13 | R1-2112069 | 10 | 0.25% | 99.0% |  |  | 40 | 4.0 |  |
| Source 13 | R1-2112069 | 10 | 0.30% | 99.0% |  |  | 40 | 4.3 |  |
| Source 13 | R1-2112069 | 10 | 0.35% | 99.0% |  |  | 40 | 4.6 |  |
| Source 13 | R1-2112069 | 10 | 0.40% | 99.0% |  |  | 40 | 5.0 |  |
| Source 13 | R1-2112069 | 10 | 0.45% | 99.0% |  |  | 40 | 5.4 |  |
| Source 13 | R1-2112069 | 10 | 0.50% | 99.0% |  |  | 40 | 6.0 |  |
| Source 13 | R1-2112069 | 10 | 0.55% | 99.0% |  |  | 40 | 6.6 |  |
| Source 13 | R1-2112069 | 10 | 0.60% | 99.0% |  |  | 40 | 7.5 |  |
| Source 13 | R1-2112069 | 10 | 0.65% | 99.0% |  |  | 40 | 8.5 |  |
| Source 13 | R1-2112069 | 10 | 0.70% | 99.0% |  |  | 40 | 9.9 |  |
| Source 13 | R1-2112069 | 10 | 0.75% | 99.0% |  |  | 40 | 11.9 |  |
| Source 13 | R1-2112069 | 10 | 0.80% | 99.0% |  |  | 40 | 14.9 |  |
| Source 13 | R1-2112069 | 10 | 0.85% | 99.0% |  |  | 40 | 19.8 |  |
| Source 13 | R1-2112069 | 10 | 0.90% | 99.0% |  |  | 40 | 29.7 |  |
| Source 13 | R1-2112069 | 10 | 0.95% | 99.0% |  |  | 40 | 59.4 |  |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | DAPS | FR1-FR1 | 0 | 0 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | DAPS | FR1-FR1 | 2 | 0.22 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | DAPS | FR1-FR1 | 4 | 0.44 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | DAPS | FR1-FR1 | 6 | 0.67 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | DAPS | FR1-FR1 | 8 | 0.89 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | DAPS | FR1-FR1 | 10 | 1.11 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | Typical HO | FR1-FR1 | 30 | 2.22 |  |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | Conditional HO | FR1-FR1 | 40 | 3.33 |  |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | Typical HO | FR1-FR1 | 50 | 4.44 |  |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | Conditional HO | FR1-FR1 | 60 | 5.55 |  |
| Source 20 | R1-2111351 | 10 | 0.10% | 99.0% | Typical HO | FR1-FR1 | 70 | 6.66 |  |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | DAPS | FR1-FR1 | 0 | 0 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | DAPS | FR1-FR1 | 2 | 0.25 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | DAPS | FR1-FR1 | 4 | 0.5 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | DAPS | FR1-FR1 | 6 | 0.75 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | DAPS | FR1-FR1 | 8 | 1 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | DAPS | FR1-FR1 | 10 | 1.25 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | Typical HO | FR1-FR1 | 30 | 2.5 |  |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | Conditional HO | FR1-FR1 | 40 | 3.74 |  |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | Typical HO | FR1-FR1 | 50 | 4.99 |  |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | Conditional HO | FR1-FR1 | 60 | 6.24 |  |
| Source 20 | R1-2111351 | 10 | 0.20% | 99.0% | Typical HO | FR1-FR1 | 70 | 7.49 |  |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | DAPS | FR1-FR1 | 0 | 0 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | DAPS | FR1-FR1 | 2 | 0.28 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | DAPS | FR1-FR1 | 4 | 0.57 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | DAPS | FR1-FR1 | 6 | 0.85 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | DAPS | FR1-FR1 | 8 | 1.14 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | DAPS | FR1-FR1 | 10 | 1.42 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | Typical HO | FR1-FR1 | 30 | 2.85 |  |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | Conditional HO | FR1-FR1 | 40 | 4.27 |  |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | Typical HO | FR1-FR1 | 50 | 5.7 |  |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | Conditional HO | FR1-FR1 | 60 | 7.12 |  |
| Source 20 | R1-2111351 | 10 | 0.30% | 99.0% | Typical HO | FR1-FR1 | 70 | 8.55 |  |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | DAPS | FR1-FR1 | 0 | 0 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | DAPS | FR1-FR1 | 2 | 0.32 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | DAPS | FR1-FR1 | 4 | 0.66 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | DAPS | FR1-FR1 | 6 | 1 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | DAPS | FR1-FR1 | 8 | 1.33 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | DAPS | FR1-FR1 | 10 | 1.66 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | Typical HO | FR1-FR1 | 30 | 3.32 |  |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | Conditional HO | FR1-FR1 | 40 | 4.98 |  |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | Typical HO | FR1-FR1 | 50 | 6.64 |  |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | Conditional HO | FR1-FR1 | 60 | 8.30 |  |
| Source 20 | R1-2111351 | 10 | 0.40% | 99.0% | Typical HO | FR1-FR1 | 70 | 9.96 |  |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | DAPS | FR1-FR1 | 0 | 0 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | DAPS | FR1-FR1 | 2 | 0.4 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | DAPS | FR1-FR1 | 4 | 0.8 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | DAPS | FR1-FR1 | 6 | 1.2 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | DAPS | FR1-FR1 | 8 | 1.59 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | DAPS | FR1-FR1 | 10 | 1.99 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | Typical HO | FR1-FR1 | 30 | 3.98 |  |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | Conditional HO | FR1-FR1 | 40 | 5.97 |  |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | Typical HO | FR1-FR1 | 50 | 7.96 |  |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | Conditional HO | FR1-FR1 | 60 | 9.95 |  |
| Source 20 | R1-2111351 | 10 | 0.50% | 99.0% | Typical HO | FR1-FR1 | 70 | 11.94 |  |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | DAPS | FR1-FR1 | 0 | 0 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | DAPS | FR1-FR1 | 2 | 0.5 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | DAPS | FR1-FR1 | 4 | 0.99 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | DAPS | FR1-FR1 | 6 | 1.49 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | DAPS | FR1-FR1 | 8 | 1.99 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | DAPS | FR1-FR1 | 10 | 2.49 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | Typical HO | FR1-FR1 | 30 | 4.97 |  |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | Conditional HO | FR1-FR1 | 40 | 7.46 |  |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | Typical HO | FR1-FR1 | 50 | 9.94 |  |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | Conditional HO | FR1-FR1 | 60 | 12.43 |  |
| Source 20 | R1-2111351 | 10 | 0.60% | 99.0% | Typical HO | FR1-FR1 | 70 | 14.91 |  |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | DAPS | FR1-FR1 | 0 | 0 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | DAPS | FR1-FR1 | 2 | 0.66 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | DAPS | FR1-FR1 | 4 | 1.32 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | DAPS | FR1-FR1 | 6 | 1.99 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | DAPS | FR1-FR1 | 8 | 2.65 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | DAPS | FR1-FR1 | 10 | 3.31 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | Typical HO | FR1-FR1 | 30 | 6.62 |  |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | Conditional HO | FR1-FR1 | 40 | 9.93 |  |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | Typical HO | FR1-FR1 | 50 | 13.24 |  |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | Conditional HO | FR1-FR1 | 60 | 16.55 |  |
| Source 20 | R1-2111351 | 10 | 0.70% | 99.0% | Typical HO | FR1-FR1 | 70 | 19.86 |  |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | DAPS | FR1-FR1 | 0 | 0 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | DAPS | FR1-FR1 | 2 | 0.99 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | DAPS | FR1-FR1 | 4 | 1.98 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | DAPS | FR1-FR1 | 6 | 2.98 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | DAPS | FR1-FR1 | 8 | 3.97 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | DAPS | FR1-FR1 | 10 | 4.96 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | Typical HO | FR1-FR1 | 30 | 9.92 |  |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | Conditional HO | FR1-FR1 | 40 | 14.88 |  |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | Typical HO | FR1-FR1 | 50 | 19.84 |  |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | Conditional HO | FR1-FR1 | 60 | 24.80 |  |
| Source 20 | R1-2111351 | 10 | 0.80% | 99.0% | Typical HO | FR1-FR1 | 70 | 29.76 |  |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | DAPS | FR1-FR1 | 0 | 0 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | DAPS | FR1-FR1 | 2 | 1.98 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | DAPS | FR1-FR1 | 4 | 3.96 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | DAPS | FR1-FR1 | 6 | 5.96 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | DAPS | FR1-FR1 | 8 | 7.93 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | DAPS | FR1-FR1 | 10 | 9.91 | Note 5 |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | Typical HO | FR1-FR1 | 30 | 19.82 |  |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | Conditional HO | FR1-FR1 | 40 | 29.73 |  |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | Typical HO | FR1-FR1 | 50 | 39.64 |  |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | Conditional HO | FR1-FR1 | 60 | 49.55 |  |
| Source 20 | R1-2111351 | 10 | 0.90% | 99.0% | Typical HO | FR1-FR1 | 70 | 59.46 |  |
| Note 1: the target cell is known  Note 2: target cell is an unknown intra-frequency cell  Note 3: target cell is an unknown inter-frequency cell  Note 4: *T = 0, Y < PDB*  Note 5: *T = Y \* (100%-PE,op) / (100%-X- PE,op), Y < PDB* | | | | | | | | | |

**Table B.2‑2. X=99%, PDB=15ms**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***PDB* (ms)** | ***PE,op*** | ***X*** | **Handover type** | **Handover case** | ***Y* (ms)** | ***T* (s)** | **Note** |
| Source 18 | R1-2111046 | 15 | 0.00% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 3.70 |  |
| Source 18 | R1-2111046 | 15 | 0.00% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 4.70 |  |
| Source 18 | R1-2111046 | 15 | 0.00% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 6.70 |  |
| Source 18 | R1-2111046 | 15 | 0.10% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 4.11 |  |
| Source 18 | R1-2111046 | 15 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 5.22 |  |
| Source 18 | R1-2111046 | 15 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 7.44 |  |
| Source 18 | R1-2111046 | 15 | 0.50% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 7.36 |  |
| Source 18 | R1-2111046 | 15 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 9.35 |  |
| Source 18 | R1-2111046 | 15 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 13.33 |  |
| Source 18 | R1-2111046 | 15 | 0.90% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 36.67 |  |
| Source 18 | R1-2111046 | 15 | 0.90% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 46.58 |  |
| Source 18 | R1-2111046 | 15 | 0.90% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 66.40 |  |
| Source 3 | R1-2111234 | 15 | 0.01% | 99.0% | Typical HO | FR1-to-FR1 | 66.5 | 4.192 |  |
| Source 3 | R1-2111234 | 15 | 0.01% | 99.0% | Typical HO | FR2-to-FR2 | 59.4 | 3.474 |  |
| Source 3 | R1-2111234 | 15 | 0.07% | 99.0% | Typical HO | FR1-to-FR1 | 66.5 | 4.459 |  |
| Source 3 | R1-2111234 | 15 | 0.07% | 99.0% | Typical HO | FR2-to-FR2 | 59.4 | 3.696 |  |
| Source 3 | R1-2111234 | 15 | 0.25% | 99.0% | Typical HO | FR1-to-FR1 | 66.5 | 5.52 |  |
| Source 3 | R1-2111234 | 15 | 0.25% | 99.0% | Typical HO | FR2-to-FR2 | 59.4 | 4.575 |  |
| Source 3 | R1-2111234 | 15 | 0.01% | 99.0% | Conditional HO | FR1-to-FR1 | 56.5 | 4.192 |  |
| Source 3 | R1-2111234 | 15 | 0.01% | 99.0% | Conditional HO | FR2-to-FR2 | 49.4 | 3.474 |  |
| Source 3 | R1-2111234 | 15 | 0.07% | 99.0% | Conditional HO | FR1-to-FR1 | 56.5 | 4.277 |  |
| Source 3 | R1-2111234 | 15 | 0.07% | 99.0% | Conditional HO | FR2-to-FR2 | 49.4 | 3.545 |  |
| Source 3 | R1-2111234 | 15 | 0.25% | 99.0% | Conditional HO | FR1-to-FR1 | 56.5 | 5.996 |  |
| Source 3 | R1-2111234 | 15 | 0.25% | 99.0% | Conditional HO | FR2-to-FR2 | 49.4 | 4.97 |  |
| Source 6 | R1-2111632 | 15 | 0.10% | 99.0% |  |  | 48 | 3.663 |  |
| Source 15 | R1-2111828 | 15 | 0% | 99.0% | DAPS |  | 2 | 0 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0% | 99.0% | Typical HO, Conditional HO |  | 42 | 2.7 |  |
| Source 15 | R1-2111828 | 15 | 0% | 99.0% | Typical HO, Conditional HO |  | 62 | 4.7 |  |
| Source 15 | R1-2111828 | 15 | 0% | 99.0% |  |  | 10 | 0 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0% | 99.0% |  |  | 20 | 0.5 |  |
| Source 15 | R1-2111828 | 15 | 0% | 99.0% |  |  | 40 | 2.5 |  |
| Source 15 | R1-2111828 | 15 | 0% | 99.0% |  |  | 60 | 4.5 |  |
| Source 15 | R1-2111828 | 15 | 0% | 99.0% |  |  | 80 | 6.5 |  |
| Source 15 | R1-2111828 | 15 | 0% | 99.0% |  |  | 100 | 8.5 |  |
| Source 15 | R1-2111828 | 15 | 0.20% | 99.0% | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0.20% | 99.0% | Typical HO, Conditional HO |  | 42 | 3.37 |  |
| Source 15 | R1-2111828 | 15 | 0.20% | 99.0% | Typical HO, Conditional HO |  | 62 | 5.86 |  |
| Source 15 | R1-2111828 | 15 | 0.20% | 99.0% |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0.20% | 99.0% |  |  | 20 | 0.62 |  |
| Source 15 | R1-2111828 | 15 | 0.20% | 99.0% |  |  | 40 | 3.12 |  |
| Source 15 | R1-2111828 | 15 | 0.20% | 99.0% |  |  | 60 | 5.61 |  |
| Source 15 | R1-2111828 | 15 | 0.20% | 99.0% |  |  | 80 | 8.11 |  |
| Source 15 | R1-2111828 | 15 | 0.20% | 99.0% |  |  | 100 | 10.60 |  |
| Source 15 | R1-2111828 | 15 | 0.40% | 99.0% | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0.40% | 99.0% | Typical HO, Conditional HO |  | 42 | 4.48 |  |
| Source 15 | R1-2111828 | 15 | 0.40% | 99.0% | Typical HO, Conditional HO |  | 62 | 7.80 |  |
| Source 15 | R1-2111828 | 15 | 0.40% | 99.0% |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0.40% | 99.0% |  |  | 20 | 0.83 |  |
| Source 15 | R1-2111828 | 15 | 0.40% | 99.0% |  |  | 40 | 4.15 |  |
| Source 15 | R1-2111828 | 15 | 0.40% | 99.0% |  |  | 60 | 7.47 |  |
| Source 15 | R1-2111828 | 15 | 0.40% | 99.0% |  |  | 80 | 10.79 |  |
| Source 15 | R1-2111828 | 15 | 0.40% | 99.0% |  |  | 100 | 14.11 |  |
| Source 15 | R1-2111828 | 15 | 0.60% | 99.0% | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0.60% | 99.0% | Typical HO, Conditional HO |  | 42 | 6.71 |  |
| Source 15 | R1-2111828 | 15 | 0.60% | 99.0% | Typical HO, Conditional HO |  | 62 | 11.68 |  |
| Source 15 | R1-2111828 | 15 | 0.60% | 99.0% |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0.60% | 99.0% |  |  | 20 | 1.24 |  |
| Source 15 | R1-2111828 | 15 | 0.60% | 99.0% |  |  | 40 | 6.21 |  |
| Source 15 | R1-2111828 | 15 | 0.60% | 99.0% |  |  | 60 | 11.18 |  |
| Source 15 | R1-2111828 | 15 | 0.60% | 99.0% |  |  | 80 | 16.15 |  |
| Source 15 | R1-2111828 | 15 | 0.60% | 99.0% |  |  | 100 | 21.12 |  |
| Source 15 | R1-2111828 | 15 | 0.80% | 99.0% | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0.80% | 99.0% | Typical HO, Conditional HO |  | 42 | 13.39 |  |
| Source 15 | R1-2111828 | 15 | 0.80% | 99.0% | Typical HO, Conditional HO |  | 62 | 23.31 |  |
| Source 15 | R1-2111828 | 15 | 0.80% | 99.0% |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0.80% | 99.0% |  |  | 20 | 2.48 |  |
| Source 15 | R1-2111828 | 15 | 0.80% | 99.0% |  |  | 40 | 12.40 |  |
| Source 15 | R1-2111828 | 15 | 0.80% | 99.0% |  |  | 60 | 22.32 |  |
| Source 15 | R1-2111828 | 15 | 0.80% | 99.0% |  |  | 80 | 32.24 |  |
| Source 15 | R1-2111828 | 15 | 0.80% | 99.0% |  |  | 100 | 42.16 |  |
| Source 15 | R1-2111828 | 15 | 0.90% | 99.0% | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0.90% | 99.0% | Typical HO, Conditional HO |  | 42 | 26.76 |  |
| Source 15 | R1-2111828 | 15 | 0.90% | 99.0% | Typical HO, Conditional HO |  | 62 | 46.58 |  |
| Source 15 | R1-2111828 | 15 | 0.90% | 99.0% |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 15 | 0.90% | 99.0% |  |  | 20 | 4.95 |  |
| Source 15 | R1-2111828 | 15 | 0.90% | 99.0% |  |  | 40 | 24.77 |  |
| Source 15 | R1-2111828 | 15 | 0.90% | 99.0% |  |  | 60 | 44.59 |  |
| Source 15 | R1-2111828 | 15 | 0.90% | 99.0% |  |  | 80 | 64.41 |  |
| Source 15 | R1-2111828 | 15 | 0.90% | 99.0% |  |  | 100 | 84.23 |  |
| Source 7 | R1-2112160 | 15 | 0.00% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 15 | 0.00% | 99.0% |  |  | 20 | 0.5 |  |
| Source 7 | R1-2112160 | 15 | 0.00% | 99.0% | Typical HO, Conditional HO |  | 40 | 2.5 |  |
| Source 7 | R1-2112160 | 15 | 0.00% | 99.0% |  |  | 60 | 4.5 |  |
| Source 7 | R1-2112160 | 15 | 0.00% | 99.0% |  |  | 80 | 6.5 |  |
| Source 7 | R1-2112160 | 15 | 0.00% | 99.0% |  |  | 100 | 8.5 |  |
| Source 7 | R1-2112160 | 15 | 0.20% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 15 | 0.20% | 99.0% |  |  | 20 | 0.6 |  |
| Source 7 | R1-2112160 | 15 | 0.20% | 99.0% | Typical HO, Conditional HO |  | 40 | 3.1 |  |
| Source 7 | R1-2112160 | 15 | 0.20% | 99.0% |  |  | 60 | 5.6 |  |
| Source 7 | R1-2112160 | 15 | 0.20% | 99.0% |  |  | 80 | 8.1 |  |
| Source 7 | R1-2112160 | 15 | 0.20% | 99.0% |  |  | 100 | 10.6 |  |
| Source 7 | R1-2112160 | 15 | 0.40% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 15 | 0.40% | 99.0% |  |  | 20 | 0.8 |  |
| Source 7 | R1-2112160 | 15 | 0.40% | 99.0% | Typical HO, Conditional HO |  | 40 | 4.1 |  |
| Source 7 | R1-2112160 | 15 | 0.40% | 99.0% |  |  | 60 | 7.5 |  |
| Source 7 | R1-2112160 | 15 | 0.40% | 99.0% |  |  | 80 | 10.8 |  |
| Source 7 | R1-2112160 | 15 | 0.40% | 99.0% |  |  | 100 | 14.1 |  |
| Source 7 | R1-2112160 | 15 | 0.60% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 15 | 0.60% | 99.0% |  |  | 20 | 1.2 |  |
| Source 7 | R1-2112160 | 15 | 0.60% | 99.0% | Typical HO, Conditional HO |  | 40 | 6.2 |  |
| Source 7 | R1-2112160 | 15 | 0.60% | 99.0% |  |  | 60 | 11.2 |  |
| Source 7 | R1-2112160 | 15 | 0.60% | 99.0% |  |  | 80 | 16.2 |  |
| Source 7 | R1-2112160 | 15 | 0.60% | 99.0% |  |  | 100 | 21.1 |  |
| Source 7 | R1-2112160 | 15 | 0.80% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 15 | 0.80% | 99.0% |  |  | 20 | 2.5 |  |
| Source 7 | R1-2112160 | 15 | 0.80% | 99.0% | Typical HO, Conditional HO |  | 40 | 12.4 |  |
| Source 7 | R1-2112160 | 15 | 0.80% | 99.0% |  |  | 60 | 22.3 |  |
| Source 7 | R1-2112160 | 15 | 0.80% | 99.0% |  |  | 80 | 32.2 |  |
| Source 7 | R1-2112160 | 15 | 0.80% | 99.0% |  |  | 100 | 42.2 |  |
| Source 7 | R1-2112160 | 15 | 0.90% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 15 | 0.90% | 99.0% |  |  | 20 | 5.0 |  |
| Source 7 | R1-2112160 | 15 | 0.90% | 99.0% | Typical HO, Conditional HO |  | 40 | 24.8 |  |
| Source 7 | R1-2112160 | 15 | 0.90% | 99.0% |  |  | 60 | 44.6 |  |
| Source 7 | R1-2112160 | 15 | 0.90% | 99.0% |  |  | 80 | 64.4 |  |
| Source 7 | R1-2112160 | 15 | 0.90% | 99.0% |  |  | 100 | 84.2 |  |
| Source 14 | R1-2112296 | 15 | 0.0% | 99.0% |  |  | 60 | 4.5 |  |
| Source 14 | R1-2112296 | 15 | 0.5% | 99.0% |  |  | 60 | 8.955 |  |
| Source 14 | R1-2112296 | 15 | 0.9% | 99.0% |  |  | 60 | 44.595 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 40 | 2.5 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 42 | 2.7 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 44 | 2.9 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 46 | 3.1 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 48 | 3.3 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 50 | 3.5 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 52 | 3.7 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 54 | 3.9 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 56 | 4.1 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 58 | 4.3 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 60 | 4.5 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 62 | 4.7 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 64 | 4.9 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 66 | 5.1 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 68 | 5.3 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 70 | 5.5 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 72 | 5.7 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 74 | 5.9 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 76 | 6.1 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 78 | 6.3 |  |
| Source 13 | R1-2112069 | 15 | 0.0% | 99.0% |  |  | 80 | 6.5 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 40 | 5.0 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 42 | 5.4 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 44 | 5.8 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 46 | 6.2 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 48 | 6.6 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 50 | 7.0 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 52 | 7.4 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 54 | 7.8 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 56 | 8.2 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 58 | 8.6 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 60 | 9.0 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 62 | 9.4 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 64 | 9.8 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 66 | 10.1 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 68 | 10.5 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 70 | 10.9 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 72 | 11.3 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 74 | 11.7 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 76 | 12.1 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 78 | 12.5 |  |
| Source 13 | R1-2112069 | 15 | 0.5% | 99.0% |  |  | 80 | 12.9 |  |
| Source 13 | R1-2112069 | 15 | 0.00% | 99.0% |  |  | 40 | 2.5 |  |
| Source 13 | R1-2112069 | 15 | 0.05% | 99.0% |  |  | 40 | 2.6 |  |
| Source 13 | R1-2112069 | 15 | 0.10% | 99.0% |  |  | 40 | 2.8 |  |
| Source 13 | R1-2112069 | 15 | 0.15% | 99.0% |  |  | 40 | 2.9 |  |
| Source 13 | R1-2112069 | 15 | 0.20% | 99.0% |  |  | 40 | 3.1 |  |
| Source 13 | R1-2112069 | 15 | 0.25% | 99.0% |  |  | 40 | 3.3 |  |
| Source 13 | R1-2112069 | 15 | 0.30% | 99.0% |  |  | 40 | 3.6 |  |
| Source 13 | R1-2112069 | 15 | 0.35% | 99.0% |  |  | 40 | 3.8 |  |
| Source 13 | R1-2112069 | 15 | 0.40% | 99.0% |  |  | 40 | 4.2 |  |
| Source 13 | R1-2112069 | 15 | 0.45% | 99.0% |  |  | 40 | 4.5 |  |
| Source 13 | R1-2112069 | 15 | 0.50% | 99.0% |  |  | 40 | 5.0 |  |
| Source 13 | R1-2112069 | 15 | 0.55% | 99.0% |  |  | 40 | 5.5 |  |
| Source 13 | R1-2112069 | 15 | 0.60% | 99.0% |  |  | 40 | 6.2 |  |
| Source 13 | R1-2112069 | 15 | 0.65% | 99.0% |  |  | 40 | 7.1 |  |
| Source 13 | R1-2112069 | 15 | 0.70% | 99.0% |  |  | 40 | 8.3 |  |
| Source 13 | R1-2112069 | 15 | 0.75% | 99.0% |  |  | 40 | 9.9 |  |
| Source 13 | R1-2112069 | 15 | 0.80% | 99.0% |  |  | 40 | 12.4 |  |
| Source 13 | R1-2112069 | 15 | 0.85% | 99.0% |  |  | 40 | 16.5 |  |
| Source 13 | R1-2112069 | 15 | 0.90% | 99.0% |  |  | 40 | 24.8 |  |
| Source 13 | R1-2112069 | 15 | 0.95% | 99.0% |  |  | 40 | 49.5 |  |
| Note 1: *T = 0, Y < PDB* | | | | | | | | | |

**Table B.2‑3. X=99%, PDB=30ms**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***PDB* (ms)** | ***PE,op*** | ***X*** | **Handover type** | **Handover case** | ***Y* (ms)** | ***T* (s)** | **Note** |
| Source 18 | R1-2111046 | 30 | 0.00% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 2.20 |  |
| Source 18 | R1-2111046 | 30 | 0.00% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 3.20 |  |
| Source 18 | R1-2111046 | 30 | 0.00% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 5.20 |  |
| Source 18 | R1-2111046 | 30 | 0.10% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 2.44 |  |
| Source 18 | R1-2111046 | 30 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 3.55 |  |
| Source 18 | R1-2111046 | 30 | 0.10% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 5.77 |  |
| Source 18 | R1-2111046 | 30 | 0.50% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 4.38 |  |
| Source 18 | R1-2111046 | 30 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 6.37 |  |
| Source 18 | R1-2111046 | 30 | 0.50% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 10.35 |  |
| Source 18 | R1-2111046 | 30 | 0.90% | 99.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 21.80 |  |
| Source 18 | R1-2111046 | 30 | 0.90% | 99.0% | Typical HO | FR1-to-FR1 | 62 | 31.71 |  |
| Source 18 | R1-2111046 | 30 | 0.90% | 99.0% | Typical HO | FR1-to-FR1 | 82 | 51.53 |  |
| Source 15 | R1-2111828 | 30 | 0% | 99.0% | DAPS |  | 2 | 0 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0% | 99.0% | Typical HO, Conditional HO |  | 42 | 1.2 |  |
| Source 15 | R1-2111828 | 30 | 0% | 99.0% | Typical HO, Conditional HO |  | 62 | 3.2 |  |
| Source 15 | R1-2111828 | 30 | 0% | 99.0% |  |  | 10 | 0 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0% | 99.0% |  |  | 20 | 0 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0% | 99.0% |  |  | 40 | 1 |  |
| Source 15 | R1-2111828 | 30 | 0% | 99.0% |  |  | 60 | 3 |  |
| Source 15 | R1-2111828 | 30 | 0% | 99.0% |  |  | 80 | 5 |  |
| Source 15 | R1-2111828 | 30 | 0% | 99.0% |  |  | 100 | 7 |  |
| Source 15 | R1-2111828 | 30 | 0.20% | 99.0% | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.20% | 99.0% | Typical HO, Conditional HO |  | 42 | 1.50 |  |
| Source 15 | R1-2111828 | 30 | 0.20% | 99.0% | Typical HO, Conditional HO |  | 62 | 3.99 |  |
| Source 15 | R1-2111828 | 30 | 0.20% | 99.0% |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.20% | 99.0% |  |  | 20 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.20% | 99.0% |  |  | 40 | 1.25 |  |
| Source 15 | R1-2111828 | 30 | 0.20% | 99.0% |  |  | 60 | 3.74 |  |
| Source 15 | R1-2111828 | 30 | 0.20% | 99.0% |  |  | 80 | 6.24 |  |
| Source 15 | R1-2111828 | 30 | 0.20% | 99.0% |  |  | 100 | 8.73 |  |
| Source 15 | R1-2111828 | 30 | 0.40% | 99.0% | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.40% | 99.0% | Typical HO, Conditional HO |  | 42 | 1.99 |  |
| Source 15 | R1-2111828 | 30 | 0.40% | 99.0% | Typical HO, Conditional HO |  | 62 | 5.31 |  |
| Source 15 | R1-2111828 | 30 | 0.40% | 99.0% |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.40% | 99.0% |  |  | 20 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.40% | 99.0% |  |  | 40 | 1.66 |  |
| Source 15 | R1-2111828 | 30 | 0.40% | 99.0% |  |  | 60 | 4.98 |  |
| Source 15 | R1-2111828 | 30 | 0.40% | 99.0% |  |  | 80 | 8.30 |  |
| Source 15 | R1-2111828 | 30 | 0.40% | 99.0% |  |  | 100 | 11.62 |  |
| Source 15 | R1-2111828 | 30 | 0.60% | 99.0% | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.60% | 99.0% | Typical HO, Conditional HO |  | 42 | 2.98 |  |
| Source 15 | R1-2111828 | 30 | 0.60% | 99.0% | Typical HO, Conditional HO |  | 62 | 7.95 |  |
| Source 15 | R1-2111828 | 30 | 0.60% | 99.0% |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.60% | 99.0% |  |  | 20 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.60% | 99.0% |  |  | 40 | 2.48 |  |
| Source 15 | R1-2111828 | 30 | 0.60% | 99.0% |  |  | 60 | 7.45 |  |
| Source 15 | R1-2111828 | 30 | 0.60% | 99.0% |  |  | 80 | 12.43 |  |
| Source 15 | R1-2111828 | 30 | 0.60% | 99.0% |  |  | 100 | 17.40 |  |
| Source 15 | R1-2111828 | 30 | 0.80% | 99.0% | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.80% | 99.0% | Typical HO, Conditional HO |  | 42 | 5.95 |  |
| Source 15 | R1-2111828 | 30 | 0.80% | 99.0% | Typical HO, Conditional HO |  | 62 | 15.87 |  |
| Source 15 | R1-2111828 | 30 | 0.80% | 99.0% |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.80% | 99.0% |  |  | 20 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.80% | 99.0% |  |  | 40 | 4.96 |  |
| Source 15 | R1-2111828 | 30 | 0.80% | 99.0% |  |  | 60 | 14.88 |  |
| Source 15 | R1-2111828 | 30 | 0.80% | 99.0% |  |  | 80 | 24.80 |  |
| Source 15 | R1-2111828 | 30 | 0.80% | 99.0% |  |  | 100 | 34.72 |  |
| Source 15 | R1-2111828 | 30 | 0.90% | 99.0% | DAPS |  | 2 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.90% | 99.0% | Typical HO, Conditional HO |  | 42 | 11.89 |  |
| Source 15 | R1-2111828 | 30 | 0.90% | 99.0% | Typical HO, Conditional HO |  | 62 | 31.71 |  |
| Source 15 | R1-2111828 | 30 | 0.90% | 99.0% |  |  | 10 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.90% | 99.0% |  |  | 20 | 0.00 | Note 1 |
| Source 15 | R1-2111828 | 30 | 0.90% | 99.0% |  |  | 40 | 9.91 |  |
| Source 15 | R1-2111828 | 30 | 0.90% | 99.0% |  |  | 60 | 29.73 |  |
| Source 15 | R1-2111828 | 30 | 0.90% | 99.0% |  |  | 80 | 49.55 |  |
| Source 15 | R1-2111828 | 30 | 0.90% | 99.0% |  |  | 100 | 69.37 |  |
| Source 7 | R1-2112160 | 30 | 0.00% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.00% | 99.0% |  |  | 20 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.00% | 99.0% | Typical HO, Conditional HO |  | 40 | 1.0 |  |
| Source 7 | R1-2112160 | 30 | 0.00% | 99.0% |  |  | 60 | 3.0 |  |
| Source 7 | R1-2112160 | 30 | 0.00% | 99.0% |  |  | 80 | 5.0 |  |
| Source 7 | R1-2112160 | 30 | 0.00% | 99.0% |  |  | 100 | 7.0 |  |
| Source 7 | R1-2112160 | 30 | 0.20% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.20% | 99.0% |  |  | 20 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.20% | 99.0% | Typical HO, Conditional HO |  | 40 | 1.2 |  |
| Source 7 | R1-2112160 | 30 | 0.20% | 99.0% |  |  | 60 | 3.7 |  |
| Source 7 | R1-2112160 | 30 | 0.20% | 99.0% |  |  | 80 | 6.2 |  |
| Source 7 | R1-2112160 | 30 | 0.20% | 99.0% |  |  | 100 | 8.7 |  |
| Source 7 | R1-2112160 | 30 | 0.40% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.40% | 99.0% |  |  | 20 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.40% | 99.0% | Typical HO, Conditional HO |  | 40 | 1.7 |  |
| Source 7 | R1-2112160 | 30 | 0.40% | 99.0% |  |  | 60 | 5.0 |  |
| Source 7 | R1-2112160 | 30 | 0.40% | 99.0% |  |  | 80 | 8.3 |  |
| Source 7 | R1-2112160 | 30 | 0.40% | 99.0% |  |  | 100 | 11.6 |  |
| Source 7 | R1-2112160 | 30 | 0.60% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.60% | 99.0% |  |  | 20 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.60% | 99.0% | Typical HO, Conditional HO |  | 40 | 2.5 |  |
| Source 7 | R1-2112160 | 30 | 0.60% | 99.0% |  |  | 60 | 7.5 |  |
| Source 7 | R1-2112160 | 30 | 0.60% | 99.0% |  |  | 80 | 12.4 |  |
| Source 7 | R1-2112160 | 30 | 0.60% | 99.0% |  |  | 100 | 17.4 |  |
| Source 7 | R1-2112160 | 30 | 0.80% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.80% | 99.0% |  |  | 20 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.80% | 99.0% | Typical HO, Conditional HO |  | 40 | 5.0 |  |
| Source 7 | R1-2112160 | 30 | 0.80% | 99.0% |  |  | 60 | 14.9 |  |
| Source 7 | R1-2112160 | 30 | 0.80% | 99.0% |  |  | 80 | 24.8 |  |
| Source 7 | R1-2112160 | 30 | 0.80% | 99.0% |  |  | 100 | 34.7 |  |
| Source 7 | R1-2112160 | 30 | 0.90% | 99.0% | DAPS |  | 2 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.90% | 99.0% |  |  | 20 | 0.0 | Note 1 |
| Source 7 | R1-2112160 | 30 | 0.90% | 99.0% | Typical HO, Conditional HO |  | 40 | 9.9 |  |
| Source 7 | R1-2112160 | 30 | 0.90% | 99.0% |  |  | 60 | 29.7 |  |
| Source 7 | R1-2112160 | 30 | 0.90% | 99.0% |  |  | 80 | 49.5 |  |
| Source 7 | R1-2112160 | 30 | 0.90% | 99.0% |  |  | 100 | 69.4 |  |
| Source 14 | R1-2112296 | 30 | 0.0% | 99.0% |  |  | 60 | 3 |  |
| Source 14 | R1-2112296 | 30 | 0.5% | 99.0% |  |  | 60 | 5.97 |  |
| Source 14 | R1-2112296 | 30 | 0.9% | 99.0% |  |  | 60 | 29.73 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 40 | 1 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 42 | 1.2 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 44 | 1.4 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 46 | 1.6 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 48 | 1.8 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 50 | 2 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 52 | 2.2 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 54 | 2.4 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 56 | 2.6 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 58 | 2.8 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 60 | 3 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 62 | 3.2 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 64 | 3.4 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 66 | 3.6 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 68 | 3.8 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 70 | 4 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 72 | 4.2 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 74 | 4.4 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 76 | 4.6 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 78 | 4.8 |  |
| Source 13 | R1-2112069 | 30 | 0.0% | 99.0% |  |  | 80 | 5 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 40 | 2.0 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 42 | 2.4 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 44 | 2.8 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 46 | 3.2 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 48 | 3.6 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 50 | 4.0 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 52 | 4.4 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 54 | 4.8 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 56 | 5.2 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 58 | 5.6 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 60 | 6.0 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 62 | 6.4 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 64 | 6.8 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 66 | 7.2 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 68 | 7.6 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 70 | 8.0 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 72 | 8.4 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 74 | 8.8 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 76 | 9.2 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 78 | 9.6 |  |
| Source 13 | R1-2112069 | 30 | 0.5% | 99.0% |  |  | 80 | 10.0 |  |
| Source 13 | R1-2112069 | 30 | 0.00% | 99.0% |  |  | 40 | 1.0 |  |
| Source 13 | R1-2112069 | 30 | 0.05% | 99.0% |  |  | 40 | 1.1 |  |
| Source 13 | R1-2112069 | 30 | 0.10% | 99.0% |  |  | 40 | 1.1 |  |
| Source 13 | R1-2112069 | 30 | 0.15% | 99.0% |  |  | 40 | 1.2 |  |
| Source 13 | R1-2112069 | 30 | 0.20% | 99.0% |  |  | 40 | 1.2 |  |
| Source 13 | R1-2112069 | 30 | 0.25% | 99.0% |  |  | 40 | 1.3 |  |
| Source 13 | R1-2112069 | 30 | 0.30% | 99.0% |  |  | 40 | 1.4 |  |
| Source 13 | R1-2112069 | 30 | 0.35% | 99.0% |  |  | 40 | 1.5 |  |
| Source 13 | R1-2112069 | 30 | 0.40% | 99.0% |  |  | 40 | 1.7 |  |
| Source 13 | R1-2112069 | 30 | 0.45% | 99.0% |  |  | 40 | 1.8 |  |
| Source 13 | R1-2112069 | 30 | 0.50% | 99.0% |  |  | 40 | 2.0 |  |
| Source 13 | R1-2112069 | 30 | 0.55% | 99.0% |  |  | 40 | 2.2 |  |
| Source 13 | R1-2112069 | 30 | 0.60% | 99.0% |  |  | 40 | 2.5 |  |
| Source 13 | R1-2112069 | 30 | 0.65% | 99.0% |  |  | 40 | 2.8 |  |
| Source 13 | R1-2112069 | 30 | 0.70% | 99.0% |  |  | 40 | 3.3 |  |
| Source 13 | R1-2112069 | 30 | 0.75% | 99.0% |  |  | 40 | 4.0 |  |
| Source 13 | R1-2112069 | 30 | 0.80% | 99.0% |  |  | 40 | 5.0 |  |
| Source 13 | R1-2112069 | 30 | 0.85% | 99.0% |  |  | 40 | 6.6 |  |
| Source 13 | R1-2112069 | 30 | 0.90% | 99.0% |  |  | 40 | 9.9 |  |
| Source 13 | R1-2112069 | 30 | 0.95% | 99.0% |  |  | 40 | 19.8 |  |
| Note 1: *T = 0, Y < PDB* | | | | | | | | | |

**Table B.2‑4. X=95%, PDB=10/15/30ms**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***PDB* (ms)** | ***PE,op*** | ***X*** | **Handover type** | **Handover case** | ***Y* (ms)** | ***T* (s)** | **Note** |
| Source 18 | R1-2111046 | 10 | 0.00% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 0.84 |  |
| Source 18 | R1-2111046 | 10 | 0.00% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 1.04 |  |
| Source 18 | R1-2111046 | 10 | 0.00% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 1.44 |  |
| Source 18 | R1-2111046 | 15 | 0.00% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 0.74 |  |
| Source 18 | R1-2111046 | 15 | 0.00% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 0.94 |  |
| Source 18 | R1-2111046 | 15 | 0.00% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 1.34 |  |
| Source 18 | R1-2111046 | 30 | 0.00% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 0.44 |  |
| Source 18 | R1-2111046 | 30 | 0.00% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 0.64 |  |
| Source 18 | R1-2111046 | 30 | 0.00% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 1.04 |  |
| Source 18 | R1-2111046 | 10 | 0.10% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 0.86 |  |
| Source 18 | R1-2111046 | 10 | 0.10% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 1.06 |  |
| Source 18 | R1-2111046 | 10 | 0.10% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 1.47 |  |
| Source 18 | R1-2111046 | 15 | 0.10% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 0.75 |  |
| Source 18 | R1-2111046 | 15 | 0.10% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 0.96 |  |
| Source 18 | R1-2111046 | 15 | 0.10% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 1.37 |  |
| Source 18 | R1-2111046 | 30 | 0.10% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 0.45 |  |
| Source 18 | R1-2111046 | 30 | 0.10% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 0.65 |  |
| Source 18 | R1-2111046 | 30 | 0.10% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 1.06 |  |
| Source 18 | R1-2111046 | 10 | 2.50% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 1.64 |  |
| Source 18 | R1-2111046 | 10 | 2.50% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 2.03 |  |
| Source 18 | R1-2111046 | 10 | 2.50% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 2.81 |  |
| Source 18 | R1-2111046 | 15 | 2.50% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 1.44 |  |
| Source 18 | R1-2111046 | 15 | 2.50% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 1.83 |  |
| Source 18 | R1-2111046 | 15 | 2.50% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 2.61 |  |
| Source 18 | R1-2111046 | 30 | 2.50% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 0.86 |  |
| Source 18 | R1-2111046 | 30 | 2.50% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 1.25 |  |
| Source 18 | R1-2111046 | 30 | 2.50% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 2.03 |  |
| Source 18 | R1-2111046 | 10 | 4.90% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 39.94 |  |
| Source 18 | R1-2111046 | 10 | 4.90% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 49.45 |  |
| Source 18 | R1-2111046 | 10 | 4.90% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 68.47 |  |
| Source 18 | R1-2111046 | 15 | 4.90% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 35.19 |  |
| Source 18 | R1-2111046 | 15 | 4.90% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 44.70 |  |
| Source 18 | R1-2111046 | 15 | 4.90% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 63.72 |  |
| Source 18 | R1-2111046 | 30 | 4.90% | 95.0% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 20.92 |  |
| Source 18 | R1-2111046 | 30 | 4.90% | 95.0% | Typical HO | FR1-to-FR1 | 62 | 30.43 |  |
| Source 18 | R1-2111046 | 30 | 4.90% | 95.0% | Typical HO | FR1-to-FR1 | 82 | 49.45 |  |

**Table B.2‑5. X=99.9%, PDB=10/15/30ms**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***PDB* (ms)** | ***PE,op*** | ***X*** | **Handover type** | **Handover case** | ***Y* (ms)** | ***T* (s)** | **Note** |
| Source 18 | R1-2111046 | 10 | 0.00% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 42.00 |  |
| Source 18 | R1-2111046 | 10 | 0.00% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 52.00 |  |
| Source 18 | R1-2111046 | 10 | 0.00% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 72.00 |  |
| Source 18 | R1-2111046 | 15 | 0.00% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 37.00 |  |
| Source 18 | R1-2111046 | 15 | 0.00% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 47.00 |  |
| Source 18 | R1-2111046 | 15 | 0.00% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 67.00 |  |
| Source 18 | R1-2111046 | 30 | 0.00% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 22.00 |  |
| Source 18 | R1-2111046 | 30 | 0.00% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 32.00 |  |
| Source 18 | R1-2111046 | 30 | 0.00% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 52.00 |  |
| Source 18 | R1-2111046 | 10 | 0.01% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 46.66 |  |
| Source 18 | R1-2111046 | 10 | 0.01% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 57.77 |  |
| Source 18 | R1-2111046 | 10 | 0.01% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 79.99 |  |
| Source 18 | R1-2111046 | 15 | 0.01% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 41.11 |  |
| Source 18 | R1-2111046 | 15 | 0.01% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 52.22 |  |
| Source 18 | R1-2111046 | 15 | 0.01% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 74.44 |  |
| Source 18 | R1-2111046 | 30 | 0.01% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 24.44 |  |
| Source 18 | R1-2111046 | 30 | 0.01% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 35.55 |  |
| Source 18 | R1-2111046 | 30 | 0.01% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 57.77 |  |
| Source 18 | R1-2111046 | 10 | 0.05% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 83.96 |  |
| Source 18 | R1-2111046 | 10 | 0.05% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 103.95 |  |
| Source 18 | R1-2111046 | 10 | 0.05% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 143.93 |  |
| Source 18 | R1-2111046 | 15 | 0.05% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 73.96 |  |
| Source 18 | R1-2111046 | 15 | 0.05% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 93.95 |  |
| Source 18 | R1-2111046 | 15 | 0.05% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 133.93 |  |
| Source 18 | R1-2111046 | 30 | 0.05% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 43.98 |  |
| Source 18 | R1-2111046 | 30 | 0.05% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 63.97 |  |
| Source 18 | R1-2111046 | 30 | 0.05% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 103.95 |  |
| Source 18 | R1-2111046 | 10 | 0.09% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 419.62 |  |
| Source 18 | R1-2111046 | 10 | 0.09% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 519.53 |  |
| Source 18 | R1-2111046 | 10 | 0.09% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 719.35 |  |
| Source 18 | R1-2111046 | 15 | 0.09% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 369.67 |  |
| Source 18 | R1-2111046 | 15 | 0.09% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 469.58 |  |
| Source 18 | R1-2111046 | 15 | 0.09% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 669.40 |  |
| Source 18 | R1-2111046 | 30 | 0.09% | 99.9% | Typical HO, Conditional HO | FR1-to-FR1 | 52 | 219.80 |  |
| Source 18 | R1-2111046 | 30 | 0.09% | 99.9% | Typical HO | FR1-to-FR1 | 62 | 319.71 |  |
| Source 18 | R1-2111046 | 30 | 0.09% | 99.9% | Typical HO | FR1-to-FR1 | 82 | 519.53 |  |

**Table B.2‑6. The evaluation results of PE,op/PER vs. T/Y**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company** | **Tdoc** | ***X*** | ***PDB* (ms)** | | ***PE,op/PER*** | ***Y* (ms)** | ***T* (s)** | ***T / Y (Y≠0)*** | **Note** |
| Source 20 | R1-2111351 | 99% | 10 | | 0~0.5 | 0~10 | 0~1.99 | 100~199 | Note 1 |
| Source 20 | R1-2111351 | 0.5~0.8 | 0~4.96 | 248.5~496 |
| Source 20 | R1-2111351 | 0.8~0.99 | 0~99.01 | 496~9901 |
| Source 20 | R1-2111351 | 0~0.5 | 30~70 | 2.22~11.94 | No analysis formula | Note 2 |
| Source 20 | R1-2111351 | 0.5~0.8 | 4.97~29.76 |
| Source 20 | R1-2111351 | 0.8~0.99 | 19.82~549.06 |
| Source 20 | R1-2111351 | 99.5% | 0~0.5 | | 0~10 | 0~3.99 | 222.11 ~ 399 | Note 1 |
| Source 20 | R1-2111351 | 0.5~0.8 | | 0~9.96 | 399~996 |
| Source 20 | R1-2111351 | 0.8~0.99 | | 0~199.10 | 996~19910 |
| Source 20 | R1-2111351 | 95% | 0~0.5 | | 0~0.39 | 22.11~39 |
| Source 20 | R1-2111351 | 0.5~0.8 | | 0~0.96 | 39~96 |
| Source 20 | R1-2111351 | 0.8~0.99 | | 0~19.01 | 96~1901 |
| Source 20 | R1-2111351 | 90% | 0~0.5 | | 0~0.19 | 11~19} |
| Source 20 | R1-2111351 | 0.5~0.8 | | 0~0.46 | 19~46 |
| Source 20 | R1-2111351 | 0.8~0.99 | | 0~9.01 | 46~901 |
| Note 1: *T = Y \* (100%-PE,op) / (100%-X-PE,op), Y<PDB*  Note 2: *T = (Y-PDB) \* (100%-PE,op) / (100%-X-PE,op), Y >= PDB* | | | | | | | | | |

============End of Text update for TR section – Mobility evaluation =============