**3GPP TSG- Meeting #**

**, , -**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | RAN WG4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***Release:*** | | |  |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) Rel-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | TBD and square bracket removal | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | All tentative values in square brackets are finalised except for values which are expected to be addressed by other release 16 CRs in RAN4#95  All TBD in specifications are addressed | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | TBD and square brakets remain in specification | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.7.2.1.1A, 4.7.2.2.1A | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

Change 1

##### 4.7.2.1.1A Relaxed measurement and evaluation of serving cell for UE category M1 in normal coverage

The UE which supports *wakeUpSignal-r15* or *wakeUpSignal-TDD-r15* shall meet the requirement defined for the DRX cycle length of N\*DRX\_cycle in Section 4.7.2.1.1, provided the following conditions are met:

- WUS has been configured in the serving cell using *WUS-Config-r15*, and

- The serving cell measurement relaxation is signalled by the network using *num-DRX-CyclesRelaxed*, and

- Serving cell S criteria is met with at least 2 dB margin.

- The relaxed monitoring criteria for neighbour cells in TS 36.304 [1] clause 5.2.4.12.1 is fulfilled,

Otherwise the requirements defined for the configured DRX cycle length in Section 4.7.2.1.1 shall apply.

The UE shall further meet the requirements in section 4.7.2.1.1 during time period T0 after following occasions:

- after the end of reception of latest paging message, or

- from the moment UE has switched from RRC\_CONNECTED state to RRC\_IDLE state.

T0 = N\*DRX cycle if the UE is not configured with eDRX\_IDLE cycle and T0 = one eDRX IDLE cycle if the UE is configured with eDRX\_IDLE cycle.

The relaxation factor N is given by Table 4.7.2.1.1A-1 if the UE is not configured with eDRX\_IDLE cycle and by Table 4.7.2.1.1A-2 if the UE is configured with eDRX\_IDLE cycle.

Table 4.7.2.1.1A-1: The relaxation factor N for a UE not configured with eDRX IDLE cycle

|  |  |
| --- | --- |
| **DRX cycle length [s]** | **Value** |
| 0.32 | Min(***n*** , 32) |
| 0.64 | Min(***n*** , 16) |
| 1.28 | Min(***n*** , 8) |
| 2.56 | Min(***n*** , 4) |
| NOTE: ***n*** is signalled by the network by using *num-DRX-CyclesRelaxed* defined in TS 36.331 [2]. | |

Table 4.7.2.1.1A-2: The relaxation factor N for a UE configured with eDRX IDLE cycle

|  |  |  |  |
| --- | --- | --- | --- |
| **DRX cycle length [s]** | **Value** | | |
| **1.28 ≤ PTW length [s] < 2.56** | **2.56 ≤ PTW length [s] < 5.12** | **5.12 ≤ PTW length [s]** |
| 0.32 | Min(***n*** , 2) | Min(***n*** , 4) | Min(***n*** , 8) |
| 0.64 | 1 | Min(***n*** , 2) | Min(***n*** , 4) |
| 1.28 | N/A | 1 | Min(***n*** , 2) |
| 2.56 | N/A | N/A | 1 |
| NOTE: ***n*** is signalled by the network by using *num-DRX-CyclesRelaxed* defined in TS 36.331 [2]. | | | |

Change 2

##### 4.7.2.2.1A Relaxed measurement and evaluation of serving cell for UE category M1 in enhaned coverage

The UE which supports *wakeUpSignal-r15* or *wakeUpSignal-TDD-r15* shall meet the requirement defined for the DRX cycle length of N\*DRX\_cycle in Section 4.7.2.2.1, provided the following conditions are met:

- WUS has been configured in the serving cell using *WUS-Config-r15*, and

- The serving cell measurement relaxation is signalled by the network using *num-DRX-CyclesRelaxed*, and

- Serving cell S criteria is met with at least 2 dB margin.

- The relaxed monitoring criteria for neighbour cells in TS 36.304 [1] clause 5.2.4.12.1 is fulfilled,

Otherwise the requirements defined for the configured DRX cycle length in Section 4.7.2.2.1 shall apply.

The UE shall further meet the requirements in section 4.7.2.2.1 during time period T0 after following occasions:

- after the end of reception of latest paging message, or

- from the moment UE has switched from RRC\_CONNECTED state to RRC\_IDLE state.

T0 = N\*DRX cycle if the UE is not configured with eDRX\_IDLE cycle and T0 = one eDRX IDLE cycle if the UE is configured with eDRX\_IDLE cycle.

The relaxation factor N is given by Table 4.7.2.2.1A-1 if the UE is not configured with eDRX\_IDLE cycle and by Table 4.7.2.2.1A-2 if the UE is configured with eDRX\_IDLE cycle.

Table 4.7.2.2.1A-1: The relaxation factor N for a UE not configured with eDRX IDLE cycle

|  |  |
| --- | --- |
| **DRX cycle length [s]** | **Value** |
| 0.32 | Min(***n*** , 32) |
| 0.64 | Min(***n*** , 16) |
| 1.28 | Min(***n*** , 8) |
| 2.56 | Min(***n*** , 4) |
| NOTE: ***n*** is signalled by the network by using *num-DRX-CyclesRelaxed* defined in TS 36.331 [2]. | |

**Table 4.7.2.2.1A-2: The relaxation factor N for a UE configured with eDRX IDLE cycle**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DRX cycle length [s]** | **Value** | | | |
| **1.28 ≤ PTW length [s] < 2.56** | **2.56 ≤ PTW length [s] < 5.12** | **5.12 ≤ PTW length [s] < 10.24** | **10.24 ≤ PTW length [s]** |
| 0.32 | 1 | Min(***n*** , 2) | Min(***n*** , 4) | Min(***n*** , 8) |
| 0.64 | N/A | 1 | Min(***n*** , 2) | Min(***n*** , 4) |
| 1.28 | N/A | N/A | 1 | Min(***n*** , 2) |
| 2.56 | N/A | N/A | N/A | 1 |
| NOTE: ***n*** is signalled by the network by using *num-DRX-CyclesRelaxed* defined in TS 36.331 [2]. | | | | |