**3GPP TSG-SA5 Meeting #147 *S5-233506rev1***

**e-Meeting, 17th-25th April, 2023**

**Source: China Unicom**

**Title: New WID on Management Aspects of URLLC**

**Document for: Approval**

**Agenda Item: 6.2.2**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>   
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

Title: New WID on Management Aspects of URLLC

Acronym: URLLC\_Mgt

Unique identifier:

Potential target Release: Rel-18

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  |  | X |  |  |
| No | X | X |  | X | X |
| Don't know |  |  |  |  |  |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a

|  |  |
| --- | --- |
|  | Study |
| X | Normative – Stage 1 |
| X | Normative – Stage 2 |
| X | Normative – Stage 3 |
|  | Normative – Other\* |

**\* Other = e.g. testing**

## 2.2 Parent Work Item

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| FS\_URLLC\_Mgt | SA5 | 950028 | Study on Management Aspects of URLLC |

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
|  |  |  |
|  |  |  |

**Dependency on non-3GPP (draft) specification: none**

# 3 Justification

5G system is able to provide data transfer capability with strict performance requirements, e.g. very low latency and high reliability requirements, to fulfil the demands of vertical industry. The performance requirements of URLLC are specified in TS 22.261, which is different from eMBB.

Existing 3GPP specifications dealing with management of URLLC in RAN network have some limitations which are proposed in the FS\_URLLC\_mgt study item. Several issues have been identified in the study especially on the aspects of configuration management and performance evaluation/assurance in RAN. Once the corresponding use case and solutions proposed is accepted, it will be recommended to normative work in the WI. This may include: defining NG-RAN KPIs or measurements for assurance of URLLC typical performance, defining NG-RAN KPI or measurements for evaluation of resource load in coexisting scenario, describing enhancements on configuration management of reliability when the requirements for uplink and downlink are asymmetry, describing enhancements on management of URLLC-related parameters configuration in RAN, etc.

Other WGs, such as SA2 and RAN2, have specified features/enhancements for URLLC, some of which may need the support or alignment from SA5. The ongoing WI, Timing Resiliency and URLLC enhancements, is conducted by SA2 and part of the objectives are about the enhancements for URLLC. It is mentioned in the WID that there are potential impacts to be covered by SA5. New enhancements have been introduced to TS38.314 by RAN2 to evaluate the performance of PDCP duplication which is a typical feature designed for URLLC. SA5 should start normative work about URLLC management in RAN to align with RAN2.

The target of this WI is to specify the management enhancement of radio network related to URLLC.

# 4 Objective

The objective of this work item is to enhance the management of URLLC-related NG RAN by specifying the following aspects:

* Specify requirements and solutions for enhancement to 3GPP NRM supporting:
  + Configuration management of reliability in RAN using network slice to implement the service when the requirements for UL and DL are asymmetric
  + Configuration management of URLLC-related parameters in service or slice profiles
* Specify requirements and solutions for enhancement to performance management:
  + Defining NG-RAN KPIs or measurements for assurance of URLLC typical performance
  + Defining NG-RAN KPIs or measurements for evaluation of resource load in coexisting scenario
  + Specifying the appropriate granular of existing performance measurements or KPIs used for URLLC

# 5 Expected Output and Time scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| New specifications {One line per specification. Create/delete lines as needed} | | | | | |
| Type | TS/TR number | Title | For info  at TSG# | For approval at TSG# | Rapporteur |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| TS 28.541 | Add new and/or enhance existing IOCs/attributes for URLLC | Mar. 2024(SA#103) |  |
| TS 28.552 | Add new and/or enhance existing measurements for URLLC | Mar. 2024(SA#103) |  |
| TS 28.554 | Add new and/or enhance existing KPIs for URLLC | Mar. 2024(SA#103) |  |

# 6 Work item Rapporteur(s)

Wang Zhaoning, China Unicom, wangzn18@chinaunicom.cn

# 7 Work item leadership

SA WG5

# 8 Aspects that involve other WGs

Co-ordination with SA2, RAN2 if needed.

# 9 Supporting Individual Members

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| --- |
| Supporting IM name |
| China Unicom |
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