**3GPP TSG-SA5 Meeting #141-e *S5-221293***

**e-meeting, 17 -26 January 2022**

**Source: China Mobile**

**Title: pCR 28.104 add inter-gNB beam selection optimization solution**

**Document for: Approval**

**Agenda Item: 6.4.15**

# 1 Decision/action requested

***The group is asked to discuss and approval.***

# 2 References

[1] 3GPP TS 28.104 “Management and orchestration; Management Data Analytics (MDA)”.

[2] 3GPP TR 28.809 “Management and orchestration; Study on enhancement of Management Data Analytics (MDA)”.

[3] 3GPP TS 28.552 “Management and orchestration; 5G performance measurements”

[4] 3GPP TS 32.422 “Telecommunication management; Subscriber and equipment trace; Trace control and configuration management”

[5] 3GPP TS 32.423 “Telecommunication management; Subscriber and equipment trace; Trace data definition and management”

# 3 Rationale

This pCR is to add the solution of inter-gNB beam selection optimization, which is based on the clause 6.5.2 in TR 28.809[2].

# 4 Detailed proposal

It proposes to make the following changes to TS 28.104[1].

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| **1st Modified Section** |

### 8.4.X MDA assisted mobility management

### 8.4.X.Y Inter-gNB beam selection optimization

##### 8.4.X.Y.1 MDA type

The MDA type for inter-gNB beam selection optimization is: BeamSelcetionOptimization.

##### 8.4.X.Y.2 Enabling data

The enabling data for inter-gNB beam selection optimization are provided in table 8.4.X.Y.2-1.

For general information about enabling data, see clause 8.2.1.

Table 8.4.X.Y.2-1: Enabling data for inter-gNB beam selection optimization

|  |  |  |
| --- | --- | --- |
| Data category | Description | References |
| Performance measurements | SS-RSRP distribution per SSB (beam) of serving NR cell | SS-RSRP distribution per SSB (clause 5.1.1.22.1 of TS 28.552 [3]). |
| SS-RSRP distribution per SSB (beam) of neighbor NR cell |  |
| SS-RSRQ distribution per SSB (beam) of serving NR cell | Clause 5.1.1.31, TS 28.552[3] |
| SS-RSRQ distribution per SSB (beam) of neighbor NR cell |  |
| The transmitted PDCP uplink/downlink data volume. | Clause 5.1.2.1 and 5.1.3.6 of TS 28.552 [3] |
| Number of success/failed handovers in terms of handover preparation/resource |  |
| Beam level measurements: CSI-RS, SSB beam related measurements  | Clause 5.1.1.28, TS 28.552 [3]; |
| MDT reports | The RSRPs of UE measurements. | RSRPs of M1 measurements in TS 32.422 [4] and TS 32.423 [5]. |
| The RSRQs of UE measuremnets.  | RSRQs of M1 measurements in TS 32.422 [4] and TS 32.423 [5]. |
| The UE location information with latitude and longitude. | UE location of M1 measurements in TS 32.422 [4] and TS 32.423 [5]. |
| Geographical data | The geographical information (longitude, latitude, altitude) of the area. |  |

##### 8.4.X.Y.3 Analytics output

The specific information elements of the analytics output for inter-gNB beam selection optimization, in addition to the common information elements of the analytics output (see clause 8.3), are provided in table 8.4.X.Y.3-1.

Table 8.4.X.Y.3-1: Analytics output for inter-gNB beam selection optimization

|  |  |  |  |
| --- | --- | --- | --- |
| Information element | Definition | Support qualifier | Properties |
| HandoverPerformanceLevel  | Handover success rate per beam ID pair. This can be quantified as high, medium or low success rate.  | M | type: ENUMmultiplicity: 1isOrdered: N/AisUnique: N/AdefaultValue: NoneisNullable: False |
| TimePeriod | Time period of the handover per beam pair and the configuration. | M | type: DataTimemultiplicity: 1isOrdered: N/AisUnique: N/AdefaultValue: NoneisNullable: False |
| gNBsList  | Objects involved: gNB(s) and cells of gNBs, | M | type: Stringmultiplicity: \*isOrdered: N/AisUnique: N/AdefaultValue: NoneisNullable: False |
| RecommendedConfigurationParameters | The weight configuration parameters of each cell which can be adjusted. Including the information of beam horizontal width, beam vertical width, beam azimuth, beam downtilt. | M | type: FFSmultiplicity: \*isOrdered: N/AisUnique: N/AdefaultValue: NoneisNullable: False |

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| **End of Modified Sections** |