3GPP TSG RAN Meeting #105 RP-24xxxx

Melbourne, Australia, Sep. 9-12, 2024

**Source: CAICT, CATT**

**Title: New WID on Introduction of BDS B2b Signal in A-GNSS**

**Document for: Approval**

**Agenda Item: 9.1.2**

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: Introduction of BDS B2b Signal in A-GNSS

Acronym: BDS\_B2b

Unique identifier:

{A number to be provided by MCC at the plenary}

Potential target Release: Rel-19

# 1 Impacts

{For Normative work, identify the anticipated impacts. For a Study, identify the scope of the study}

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

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a WI.

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

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

## 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the parent Work Item.

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| N/A | N/A | N/A | N/A |

### 2.3 Other related Work Items and dependencies

{List here other Work Items which relate to the proposed one, such as a Work Item in an earlier Release if further enhancing the feature from the previous Release)}

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
| 830077 | NR Positioning Support | Preceding Work Item |

**Dependency on non-3GPP (draft) specification:**

# 3 Justification

The ICD of the BeiDou Navigation Satellite System Signal In Space for Open Service Signal B2b was published by the China Satellite Navigation Office in July, 2020. There are also requirements to introduce it in A-GNSS in 3GPP to increase the positioning accuracy, provide timing for UEs, etc. The main work is similar to what we have done for B1C, B2a, B3I signals. Both 4G and 5G system need to support providing the assistant information of B2b signal.

# 4 Objective

Specify A-BDS enhancements in Rel-19, including:

* Supporting new signal of BDS B2b in A-GNSS for both 4G and 5G [RAN2, RAN4];
* Specify corresponding assistant information in dedicated signaling [RAN2].

# 5 Expected Output and Time scale

***{If this WID covers both stage 2 and stage 3, clearly indicate the different completion dates.}***

|  |
| --- |
| 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 |
|  TS37.355 | Support BDS B2b signal in A-GNSS, define corresponding assistant data for B2b, and add reference of B2b. | RAN#108 | This TS covers Stage 3 for both LTE and NR. |
| TS36.305 | Add corresponding references of B2b. | RAN#108 | This TS covers Stage 2 in LTE. |
| TS38.305 | Add corresponding references of B2b. | RAN#108 | This TS covers Stage 2 in NR. |
| TS36.171 | Add corresponding references of B2b and define corresponding requirements if needed. | RAN#109 | This TS covers the requirements in LTE. |
| TS38.171 | Add corresponding references of B2b and define corresponding requirements if needed. | RAN#109 | This TS covers the requirements in NR. |

# 6 Work item Rapporteur(s)

{Mandatory: <FamilyName>, <GivenName>, <Company>, <email address>}

{Optional: <FamilyName>, <GivenName>, <Company>, <email address>: Secondary task(s)}

{The first listed Rapporteur is the work item primary Rapporteur. The role of a Rapporteur is further described in [www.3gpp.org/specifications-groups/delegates-corner/writing-a-new-spec](http://www.3gpp.org/specifications-groups/delegates-corner/writing-a-new-spec). By default, the primary Rapporteur shall ensure the production of the post-completion summary.

Secondary Rapporteur(s) are possible for specific secondary task(s), such as: "Write the post-completion summary"; "In charge of a specific aspect of the work item (specify which)"; "Rapporteur for a secondary responsible WG (specify which)"}

# 7 Work item leadership

Leading working group: RAN2

Secondary responsible Working Group: RAN4

# 8 Aspects that involve other WGs

N/A

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Apple |
| ASR |
| ADINNO INC. |
| CAICT |
| CATT |
| CBN |
| China broadnet |
| China Telecom |
| China Unicom |
| CMCC |
| Ericsson |
| H3C |
| Hisilicon, |
| Honor |
| Huawei |
| IIRC |
| Intel |
| Lenovo |
| MediaTek Inc |
| Nokia |
| Nokia Shanghai Bell |
| OPPO |
| Qualcomm |
| Reliance Jio |
| Samsung |
| Spreadtrum |
| Swifts |
| vivo |
| Xiaomi |
| ZTE |