**3GPP TSG RAN WG1 Meeting #101 R1-200xxxx**

**e-Meeting, May 25th - June 5th, 2020**

**Title: [Draft]** LS on TDD configuration indication in PSBCH

**Response to:**

**Release:** Rel-16

**Work Item:** 5G\_V2X\_NRSL-Core

**Source:** RAN1

**To:** RAN2

**CC:**

**Contact Person:**

#### Name: Teng Ma

E-mail Address: mateng@catt.com

# 1. Overall Description:

In NR V2X synchronization discussion, RAN1 reached the following agreements:

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| Agreements:* For indication of TDD configuration:
* X=1 bit indicates the number of patterns
	+ Value 0 indicates one pattern is used.
	+ Value 1 indicates two patterns are used.
* Y=4 bits indicate the periodicity information
	+ When one pattern is used, Y indicates the periodicity of the pattern.
	+ When two patterns are used, Y jointly indicates the periodicities of the two patterns.
* Z=7 bits indicate the UL slots
	+ UL slots are jointly indicated by 7 bits when two patterns are configured.
	+ FFS other details.

Agreements:* When transmitting PSBCH, UE derives the values of X/Y/Z; from RRC configuration of TDD-UL-DL-ConfigCommon and maps them to the “indication of TDD configuration” field of PSBCH.

Agreements:For indication of the UL slots by Z,* If single pattern is configured, Z bits indicate the UL slot number in the pattern is n.
* If two patterns are configured, Z bits indicate the state index derived by the UL slots,

$$n=\left⌊\frac{n\_{2}}{w}\right⌋\*\left⌈\frac{P\*2^{μ}+1}{w}\right⌉+\left⌊\frac{n\_{1}}{w}\right⌋$$Where* *n*1 is the number of UL slots in the first pattern,
* $n\_{2}$*n*2 is the number of UL slots in the second pattern,
* $P$*P* is the periodicity in units of ms of the first pattern,
* w is the granularity of resource indication,
* $μ$μ is (working assumption)
* 0/1/2/3 corresponds to the 15/30/60/120 kHz SCS for SL respectively.
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The corresponding TP of TS 38.213 based on the agreements above is endorsed as in R1-200xxxx.

In RAN1’s perspective, *SL-TDD-Config* with 12-bit payload size in PSBCH cannot be set to a value with the same meaning of *TDD-UL-DL-ConfigCommon*. The current definition in TS 38.331 can be changed as:

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| 5.8.9.4.3 Transmission of *MasterInformationBlockSidelink* messageThe UE shall set the contents of the *MasterInformationBlockSidelink* message as follows:1> if in coverage on the frequency used for the NR sidelink communication as defined in TS 38.304 [20].2> set *inCoverage* to *true*;2> if *tdd-UL-DL-ConfigurationCommon* is included in the received *SIB1*:3> set *sl-TDD-Config* according to the definition in subclause 16.1 of TS 38.213; |

**2 Actions:**

**To RAN WG2:**

RAN1 respectfully asks RAN2 to take the agreements above into account.

**3 Date of Next RAN WG1 Meetings:**

TSG-RAN WG1 Meeting #102 24 - 28 Aug. 2020, Online

TSG-RAN WG1 Meeting #102bis 12 - 16 Oct. 2020, China